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PERSONAL

Mr. William B. Ferguson has been appointed City Engineer of Vancouver, B. C.

Mr. C. A. Hoffnagle has been appointed Superintendent of the City Water-Works, of Burlington, Vt.

Mr. G. A. Gessner, Jr., has resigned as City Engineer of Alexandria, Ind., to take a position in the office of the City Engineer of Toledo, O.

Mr. J. H. Pennington has been appointed Superintendent of Motive Power of the Delaware, Susquehanna & Schuylkill Ry., to succeed Mr. J. R. Wagner, deceased.

Mr. W. D. Lovell has succeeded the firm of Crellin & Lovell, civil and consulting engineers, of Des Moines, Ia., the firm having been dissolved by mutual consent.

Mr. F. W. Whittridge, of New York, has been elected President of the Cleveland, Akron & Columbus Ry. Co., to fill the vacancy caused by the death of Mr. Calvin S. Brice.

Mr. Pierre O. Keilholtz has been appointed Chief Engineer in charge of the electrical and mechanical engineering department of the United Railways & Electric Co., of Baltimore, Md.

Mr. R. J. Gowen, of Wausau, Wis., has been appointed Chief Engineer of the Wisconsin & Michigan R. R., with headquarters in the Old Colony Bldg., Chicago, vice Mr. A. M. Kinsman, resigned.

Mr. Timothy Howard, who will have charge of the government telegraph and telephone system of Australia, is in the United States making an investigation of American methods of management.

Mr. A. E. Godeffroy has been elected President, and Mr. T. W. Little, Secretary, of the Port Jervis, Monticello & New York R. R. Co., to succeed Mr. A. B. Calvin and Mr. John R. Lee, respectively.

Mr. Charles H. Black, of Chelsea, Mass., President of the Massachusetts Highway Association, has been appointed Superintendent of Paving for Havana, Cuba. He will begin work in Cuba about April 15.

Prof. Thomas J. See, of Missouri, recently appointed Professor of Mathematics in the Naval Observatory, has been designated as Chief of the Nautical Almanac, to succeed Prof. Simon Newcomb, who retired on March 12, 1897.

Messrs. R. Wigram, H. H. Ivatts, James Constantin, Thomas O. Mein and R. P. Ellis have arrived in this country from England as a Commission to study railway practice in America, and particularly to study methods of freight traffic and the use of automatic couplers.

Mr. Alexander J. Wurts, M. Am. Inst. E. E., engineer of the Westinghouse Electric & Mfg. Co., Pittsburg, Pa., delivered a lecture under the auspices of the Electric Club of Cleveland, March 15, at the Case School of Applied Science, Cleveland, O., on "High Tension Electric Disturbances."

Mr. Frederick C. Field, electrical engineer, and Mr. Frank W. Everitt, electrical and mechanical engineer, have formed a partnership under the firm name of Field & Everitt, with offices in the Queen Building, 41 Cedar St., New York. Both gentlemen are from the Massachusetts Institute of Technology. Mr. Field was formerly with the Edison Electric Illuminating Co., of Brooklyn, and Mr. Everitt with the Union Iron Works, of San Francisco.

Mr. Frank B. Ward has been appointed by Mr. Robert A. Bole as Manager of the Pittsburg and Cleveland branches of Manning, Maxwell & Moore, to have charge of their branch office at Cleveland, O. Mr. Ward was for several years the Secretary and General Manager of the Michigan Brass & Iron Works, of Detroit, Mich., and previous to that acted for two years as Manager of the Chicago office of the Brown Hoisting & Conveying Machine Co.

Mr. Charles Hansel, M. Am. Soc. C. E., has resigned his position as Manager of the Department of Sales and Installation of the Union Switch & Signal Co., to which he was appointed at the time of the consolidation of the National Switch & Signal Co., of which company he was Vice-President and General Manager, with the Union Switch & Signal Co., under the name of the latter. Mr. Hansel still retains his office as Vice-President and General Manager of the National Switch & Signal Co., and will continue in that position until May 1, with offices at 43 Cedar St., New York.

Mr. A. C. Rice, M. Am. Soc. M. E., consulting and hydraulic engineer, of Dayton O., has resigned the position he has long held as General Superintendent of the Stilwell-Bierce & Smith-Vaile Co., in order to devote his entire time to his professional work. Mr. Rice has been prominently identified with the largest water power developments of the past few years, and at the present time is engaged on plans for several large pulp and paper mills and power developments. Among the largest of these is one of 80,000-HP., at Grand Falls, N. B., for a wealthy syndicate of American and Canadian capitalists.

Mr. W. C. Armstrong has been appointed by the Chicago and Northwestern Ry. Co. Resident Engineer in Charge of the Boone County Ry. construction, with headquarters at Boone, Ia. Other appointments are those of Mr. D. C. Dunlap, as Resident Engineer in Charge of the Boyer Valley Ry. construction, with headquarters at Wall Lake, Ia.; Mr. C. S. Hall, as Resident Engineer in Charge of the Minnesota & Iowa Ry. construction, with headquarters at Butterfield, Minn., and Mr. L. P. Yale, Resident Engineer in Charge of the Mankato & New Ulm Ry. construction, with headquarters at Mankato, Minn.

Prof. James Dewar, F. R. S., of London, has had conferred upon him the Hodgkins gold medal of the Smithsonian Institute, for his discovery of the process of liquefying air. This medal is about 3 ins. diameter; has a bullion value of about $300, and was made in Paris. It is the first gold medal given to anyone under the bequest of $200,000 made to the Smithsonian Institute by Thos. George Hodgkins; one-half of the income to be expended in aiding and rewarding discoveries of new properties in air. About two years ago $10,000 from this fund was divided between the principal discovers of the new element argon, and four silver and eight bronze medals were distributed at the same time.

OBITUARY.

Mr. Henry C. Eyre, founder of the foundry and machine works of H. C. Eyre & Co., died at Chester, Pa., on March 13, aged 63.

M. Jean Baptiste Sebastian Krantz, the French engineer, formerly Director-General of Roads and Bridges, died at Paris, on March 17, aged 82.

Mr. Charles Everett Clark, a former President of the Master Builders' Association of Boston, and a Director of the Boston Steel & Iron Co., died at Somerville, Mass., on March 20, aged 63.

Mr. George C. Thomas died at his home at East Orange, N. J., on March 18, aged 45 years. Until recently he was connected with the Steele & Condit Iron Works, of Jersey City, and was the inventor of an ice-making machine.

Mr. R. J. McClure, Consulting Engineer of the Chicago, Burlington & Quincy R. R., died at Miami, Fla., March 17. He had held this position for a number of years, and had been a member of the Western Society of Engineers since 1870.

Mr. Henry E. Smyser, a mechanical engineer, who for the last seven years had been in the employ of the Arbuckles, where machines of his patenting for packing sugar and coffee were used, died in York, Pa., his former home, on March 15, aged 62 years.

Capt. Samuel Trott died at Miami, Fla., on March 11, aged 67. He laid the French cable, and the cable for the United States between Key West and Dry Tortugas, and invented a number of devices used in deep-sea cable work, including an electric grapnel.

Mr. Arthur S. C. Wuertele, M. Am. Soc. C. E., died at Albany, N. Y., March 13, aged 68. He was formerly Division Superintendent of the New York Central R. R., and Bridge Engineer of the Delaware & Hudson Canal Co. From 1887 to 1892 he was Deputy State Engineer of New York.

Mr. John R. Downey, a builder, died of cancer of the throat at his residence in New York city, on March 16, aged 45. Mr. Downey, in conjunction with his father, Mr. John Downey, built the Waldorf and Astoria Hotels, the Park Row Syndicate and the Home Life Insurance Co.'s buildings.

Prof. Othniel C. Marsh, M. A., Ph. D., LL. D., Professor of Paleontology at Yale University, and one of the most famous geological scholars of the world, died at New Haven, on March 18. He was born at Lockport, N. Y., on October 29, 1831, and graduated from Yale University in 1860. He had held his late professorship since 1866.

Mr. Frederick Maeck Barstow died at Burlington, Vt., on March 17, from a fever contracted in the South during the late war with Spain. He was born in Shelburne, Vt., in 1860, and was graduated in 1881 from the University of Vermont with the degree of Civil Engineer. Most of his professional life was spent on government river and harbor work as U. S. Assistant Engineer.

ENGINEERING SOCIETIES.

COMING TECHNICAL MEETINGS.

CIVIL ENGINEERS' CLUB OF CLEVELAND.
March 28. Secy., Wm. H. Searles, Case Library Bldg., Cleveland.

FRANKLIN INSTITUTE.
March 28. "Water Power Electric Plants in the United States," B. C. Washington, Jr. April 12, "Riddles Wrought in Iron and Steel," Paul Kreanpointner. Secy., Wm. H. Wahl, 15 South 7th St., Philadelphia, Pa.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS
March 29. Secy., Ralph W. Pope, 26 Cortlandt St., New York city.

WISCONSIN ENGINEERS' SOCIETY.
March 30. Annual meeting, Appleton, Wis. Secy., F. J. Harriman, Appleton Wis.

CANADIAN SOCIETY OF CIVIL ENGINEERS.
March 30. Secy., H. C. McLeod, 112 Mansfield St., Montreal, Que.

ENGINEERS' CLUB OF ST. LOUIS.
April 3. Secy., E. R. Fish, 2401 N. Spring Ave., St. Louis, Mo.

CIVIL ENGINEERS' SOCIETY OF ST. PAUL.
April 3. Secy., C. L. Annan, City Engineer's Office, St. Paul, Minn.

ENGINEERING SOCIETY OF WESTERN NEW YORK.
April 3. Secy., H. J. March, Library Bldg., Buffalo, N. Y.

WESTERN SOCIETY OF ENGINEERS.
April 5. Secy., N. L. Litten, Monadnock Block, Chicago, Ill.

AMERICAN SOCIETY OF CIVIL ENGINEERS.
April 5. Secy., C. W. Hunt, 220 W. 57th St., New York city.

FOUNDRYMEN'S ASSOCIATION (Philadelphia).
April 5. Secy., Howard Evans, Pier 45, N. Delaware Ave., Philadelphia, Pa.

BROOKLYN INSTITUTE OF ARTS AND SCIENCES.
April 7. Secy., Henry I. Weed, Brooklyn Institute of Arts and Sciences, Brooklyn, N. Y.

TECHNICAL SOCIETY OF THE PACIFIC COAST.
April 7. Secy., O. Von Geldern, 819 Market St., San Francisco, Cal.

CHICAGO ELECTRICAL ASSOCIATION.
April 7. Secy., J. R. Cravath, 825 Monadnock Block, Chicago, Ill.

MONTANA SOCIETY OF ENGINEERS.
April 8. Secy., A. S. Hovey, National Bank Bldg., Helena, Mont.

THE LOUISIANA ENGINEERING SOCIETY.
April 10. Secy., J. F. Coleman, 712 Union St., New Orleans, La.

ENGINEERS' CLUB OF KANSAS CITY.
April 10. Secy., F. W. Tuttle, Baird Bldg., Kansas City, Mo.

DENVER SOCIETY OF CIVIL ENGINEERS.
April 11. Secy., W. B. Lawson, 36 Jacobson Bldg., Denver, Colo.

ENGINEERS' CLUB OF PHILADELPHIA.
April 11. "The Fruits of Sanitary Science," Prof. J. B. Johnson. Secy., L. F. Rondinella, 1122 Girard St., Philadelphia, Pa.

NORTHWEST RAILWAY CLUB.
April 11. Secy., T. A. Foque, Soo Line, Minneapolis, Minn.

NEW ENGLAND RAILWAY CLUB.
April 11. Secy., Edw. L. Janes, P.O. Box 1158, Boston, Mass.

AMERICAN INSTITUTE OF ARCHITECTS (New York Chapter).
April 12. Secy., Chas. I. Berg, 10 West 23d St., New York city.

AMERICAN RAILWAY ASSOCIATION.
April 12. Detroit, Mich. Secy., W. F. Allen, 24 Park Place.

BROOKLYN ENGINEERS' CLUB.
April 13. Secy., A. J. Provost, Jr., 191 Montague St., Brooklyn, N. Y.

ENGINEERING ASSOCIATION OF THE SOUTH.
April 13. Secy., H. M. Jones, 1000 Broad St., Nashville, Tenn.

ST. LOUIS RAILWAY CLUB.
April 14. Secy., H. H. Roberts, 511 Commercial Bldg., St. Louis, Mo.

WISCONSIN STATE CHEMICAL ASSOCIATION.
April 14. Secy., I. Ladoff, 154 Knapp St., Milwaukee, Wis.

ENGINEERS' CLUB OF COLUMBUS.
April 15. Secy., H. M. Gates, 12½ North High St., Columbus, O.

TECHNICAL CLUB OF OMAHA.
April 17. Secy., J. Harry Lawrie, Omaha, Neb.

ENGINEERS' CLUB OF MINNEAPOLIS.
April 17. Secy., H. E. Smith, 1620 S. E. 14th St., Minneapolis, Minn.

ENGINEERS' AND ARCHITECTS' CLUB OF LOUISVILLE.
April 17. Secy., Marshall Morris, 16 Norton Bldg., Louisville, Ky.

WESTERN RAILWAY CLUB.
April 18. Secy., F. M. Whyte, 225 Dearborn St., Chicago, Ill.

ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA
April 18. Secy., R. A. Fessenden, 410 Penn Ave., Pittsburg, Pa.

BOSTON SOCIETY OF CIVIL ENGINEERS.
April 19. Secy., S. E. Tinkham, City Hall, Boston, Mass.

WESTERN FOUNDRYMEN'S ASSOCIATION.
April 19. Secy., B. M. Gardner, 1522 Monadnock Block, Chicago, Ill.

ENGINEERS' CLUB OF CINCINNATI.
April 20. Secy., J. F. Wilson, P.O. Box 333, Cincinnati, O.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.
April 20. Secy., F. A. Charpiot, P.O. Box 13, Savannah, Ga.

NEW YORK RAILROAD CLUB.
April 20. Secy., W. W. Wheatley, 168 Montague St., Brooklyn, N. Y.

ROCHESTER ENGINEERING SOCIETY.
April 21. Secy., John F. Skinner, Reynolds Library Bldg., Rochester, N. Y.

THE DETROIT ENGINEERING SOCIETY.
April 21. Secy., Henry Goldmark, Wayne Co. Savings Bank Bldg., Detroit, Mich.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.
May 9-12. Spring meeting, Washington, D. C. Secy., F. R. Hutton, 12 W. 31st St., New York city.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—The spring meeting of this society will be held at Washington, D. C., May 9-12. F. R. Hutton, Secy.

ROCHESTER ENGINEERING SOCIETY.—A meeting of this society was held on March 17 and a paper on "The History of the Steam Engine" was presented by Mr. Edwd. G. Ashley.

WESTERN SOCIETY OF ENGINEERS.—A special meeting of this society was held at Chicago, Ill., on March 15. Mr. L. A. Ferguson, of the Chicago Edison Co., read a paper, entitled "The Development of a Central Lighting Station."

THE CIVIL ENGINEERS' CLUB OF CLEVELAND.—At the annual meeting of this club, held March 14, the following officers were elected: Pres., Col. Jared A. Smith, U. S. A.; Vice-Pres., Prof. John W. Langley; Secy., Arthur A. Skeels; Treas., John N. Coffin; Librarian, Wm. E. Reed; Directors, Jos. R. Oldham, Wm. B. Hanlon.

THE ENGINEERS' CLUB OF PHILADELPHIA.—A special meeting of this club will be held on March 25 to discuss the present problem of the water supply of the City of Philadelphia, and prepare an address to the public.
L. F. Rondinella, Secy.

The annual report showed a slight falling off in membership, but an excellent financial condition. A report on the committee on federation of the Civil Engineers' Club, with other scientific societies of Cleveland, was adopted. Wm. H. Searles, Secy.

SCRANTON ENGINEERS' CLUB.—At the meeting of this club, held on March 16, Prof. A. H. Sabin, chemist for the Edward Smith & Co., New York city, read a paper on "The Protection of Iron and Steel Structures from Corrosion." Morgan Davis, Jr., Secy.

THE MONTANA SOCIETY OF ENGINEERS.—A meeting of this society was held at Butte, Mont., on March 11. This was the first meeting of the society held outside of Helena. The paper of the evening, entitled "The Development of Road Building and Street Pavements," was by F. W. Blackford. Granite block paving was opposed and wood block and asphalt pavements were strongly favored. The next meeting will be held at Butte in April.

NEW YORK ELECTRICAL SOCIETY.—A meeting of this society will be held on March 29 at the House of the American Society of Civil Engineers, 220 West 57th St., New York city. Prof. Elihu Thomson will deliver a lecture on "Electricity at High Pressures." Apparatus will be exhibited and experiments performed which will add to the interest of the occasion. Tickets of admission will be required, which can be obtained by members upon application to the secretary on or before March 25.
George H. Guy, Secy.

NEW ENGLAND RAILWAY CLUB.—The annual meeting of this club was held at Boston, Mass., on March 14. Mr. C. C. Elwell delivered an illustrated lecture, entitled "Travel in Europe." The officers elected for the ensuing year are as follows: Pres., W. P. Appleyard; Vice-Pres., Henry Bartlett; Secy., E. L. Janes; Treas., Chas. W. Sherburne. The next meeting will be held on April 11, at which it is expected that Prof. E. F. Miller, of the Massachusetts Institute of Technology, will present a paper on "The Use of the Steam Engine Indicator."

ENGINEERS' CLUB OF ST. LOUIS.—The 487th meeting of this club was held on March 15. Plans for the celebration of the 30th anniversary of the club were discussed, and details of arrangements were left to the entertainment committee.

The paper of the evening, "Recent Concrete Construction on the Illinois and Mississippi Canal," was then read by the secretary, in the absence of the author, Mr. J. W. Woermann. The paper gave a description of the methods of construction of the locks being built on the canal, and the proportions and character of the materials used. Costs of the various items making up the total cost of two of the locks were given and comparisons were made of their cost per cubic yard on this work, with the cost of similar work in other parts of the country. Some drawings and photographs showing the details of construction were exhibited. E. R. Fish, Secy.

BOSTON SOCIETY OF CIVIL ENGINEERS.—At the meeting of the society, held March 15, the following officers were elected for the ensuing year: President, C. Frank Allen; Vice-President, T. H. Barnes; Secretary, S. E. Tinkham; Treasurer, E. W. Howe; Librarian, F. L. Fales; Director, A. E. Burton. The reports of the Secretary and Treasurer showed the finances of the society to be in excellent condition, the total property on hand amounting to $10,179, of which $9,252 are credited to the permanent fund and $927 to the current fund. The literary exercises of the meeting consisted in a description of the Providence, R. I., sewerage and sewage disposal systems, and more particularly of the new sewage pumping plant and the new basins for purification by chemical precipitation, which are now in process of construction. This description was illustrated by stereopticon views of the work and was delivered orally by Mr. O. F. Clapp, City Engineer, Providence, R. I.

NEW PUBLICATIONS.

REPORT: MASSACHUSETTS HARBOR AND LAND COMMISSIONERS, 1898.—Woodward Emery, Clinton White, Charles E. Doten, Commissioners. Pub. Doc. Paper; 6 × 9 ins.; pp. 116.

This report reviews the work of the commission for the year ending Nov. 30, 1898, in improving the harbors and lands of the State of Massachusetts.

MANILA AND THE PHILIPPINE ISLANDS.—An up-to-date handbook of facts compiled from official U. S. War Department information, Spanish reports and original investigation. The Philippines Co., New York. Paper; 7¼ × 5 ins.; pp. 31; maps.

This pamphlet gives a very general sketch of Manila and the islands, including the postal service, means of communication, population by provinces, religion, education, climate, trade, etc.

ANNUAL REPORTS; KENTUCKY RAILROAD COMMISSION, 1897, 1898.—John C. Wood, J. F. Dempsey, H. S. Irwin, Commissioners. Pub. Doc. Paper; 6 × 9 ins.; pp. 334.

Each of these reports, which come to us together, contains a brief summary of railway affairs during the years covered, followed by a full record of the assessments for taxation and a digest of the state laws relating to railway operation. The most interesting feature of the two reports, however, is the digest of the railway laws of each state of the United States, which is contained in the report for 1897.

ENGINEERING ASSOCIATION OF THE SOUTH.—Transactions for 1898. Vol. IX. Office of Secretary and Treasurer, 1000 Broad St., Nashville, Tenn. Paper, 9 × 6 ins.; pp. 80. $2.

The contents of this volume of the Transactions are: Small Railway Culverts, Hunter McDonald; The Relation of Biology to the Purification of Water, Paul M. Jones; A Typical Loading for Railway Bridge Specifications, W. H. Schuerman; Phosphate Rock of the South, John S. O'Neal; Coal Cost Sheets, J. J. Ormsbee; Annual Address of the President, J. S. Walker; Annual Report of the Secretary, C. B. Wilson; Memorial and List of Members.

TRADE OF THE PHILIPPINE ISLANDS.—By Frank H. Hitchcock, Chief Section of Foreign Markets, U. S. Department of Agriculture, Washington, D. C. Paper; 9 × 6 ins.; pp. 160; map.

This is an exhaustive tabular statement of the exports and imports of these islands up to 1894, together with a description of their character, and the proportionate trade with other countries. The average annual value of the commerce of the islands for the period 1880-1894 is put down at $37,566,005. The leading exports are Manila hemp and sugar, with leaf tobacco, cigars, cigarettes and coffee, following in the order given. The chief imports are cotton goods, kerosene, wine, rice, wheat flour, canned goods, nails, household utensils, etc.

TRADE PUBLICATIONS.

(The standard sizes for pamphlets and trade catalogues recommended by all the principal engineering societies of the United States are: 8 1-2 x 6 ins. and 9 x 12 ins.)

FRICTION CLUTCHES, PULLEYS AND COUPLINGS.—Hess, Snyder & Co., Massillon, Ohio.

This is a circular illustrating some of the products of the company named.

OIL FILTERS.—The Burt Mfg. Co., Akron, Ohio. Pamph.; 3¾ × 8¼ ins.; pp. 13 and 8.

These pamphlets describe the Cross and the Warden oil filters and purifiers for use in all places where large quantities of lubricating oil are required.

HEATING APPARATUS.—The J. H. McLain Co., Canton, Ohio. Pamph.; 7¼ × 8½ ins.; pp. 48; illustrated.

This pamphlet contains illustrations and descriptions of eight types of hot water heaters for residences, apartment houses, schools, public buildings, etc.

PAINTS.—Lowe Brothers Co., Dayton, O. Paper; four pamphlets; 4 × 9 ins.; pp. 4; 3⅝ × 4⅛ ins.; pp. 10; 2¾ × 4 ins.; pp. 8; 2¾ × 3¾ ins.; pp. 8.

These little pamphlets contain brief particulars of some of the company's specialties, including high standard liquid paint, freight car paints, and red lead metal preservative.

GAS AND GASOLINE ENGINES.—Coal Handling Machinery Co., Chicago, Ill. Four circulars; paper; 3½ × 6¼ and 6 × 9½ ins.; illustrated.

The Cornell gas and gasoline engine, manufactured by this company, is of the vertical inverted type, mounted on a pedestal foundation with outside flywheels. It may be used to drive pumping and electric light plants, and for various other purposes.

GENERATORS AND MOTORS AND MINING LOCOMOTIVES.—The Akron Electrical Mfg. Co., Akron, Ohio. Pamph.; 7 × 10¼ ins.; pp. 4 and 8; illustrated.

These are bulletins 2 and 3 of the series issued by this company. No. 2 briefly describes the Akron electric mining locomotives which are made in sizes from 25 to 150 HP. No. 3 is entitled "Direct Current Apparatus" and describes the main features of the generators and motors manufactured for lighting, railway or power purposes.

HOT WATER AND STEAM BOILERS.—The Novelty Iron Co., Canton, Ohio. Circulars; 6 × 9 ins.; pamph.; 4 × 6 ins.; illustrated.

These are a series of circulars of uniform size in which the good points of the hot water and steam heaters of this company are set forth. The illustrations afford a clear idea of the general appearance and construction of the several types. The pamphlet in addition to data on the company's steam heaters contains illustrations and dimension tables of steam-heating accessories.

ROAD BUILDING MACHINERY.—Climax Road Machine Co., Marathon, N. Y. Pamph.; 9 × 6 ins.; pp. 44; illustrated.

Describes and illustrates rock-crushers of various types, with elevators and screens; 10-ton portable bins; portable engines; rotary screens; distributing wagons; steel highway bridges; reversible street roller; and shows views of plants as erected and in operation. The Climax road machine is very fully illustrated, together with several varieties of scrapers, grading plows, etc.

ASPHALT PAVING.—Warren-Scharf Asphalt Paving Co., 81 Fulton St., New York. Paper; 8 × 5¾ ins.; pp. 64. Illustrated.

By handsome photogravures, maps of cities and tables, this pamphlet illustrates the work performed by this company. The character and advantages of asphalt paving are fully set forth in the text and by the illustrations. The summary of work done shows that the square yards laid by the Warren-Scharf Co. in 42 cities and towns is equivalent to one street 30 ft. wide and about 260 miles long.

COILS AND BENDS.—The Whitlock Coil Pipe Co., Elmwood, Conn. Two pamphs; 6 × 3½ ins.; pp. 20; illustrated; 3½ × 6 ins.; pp. 36.

In the first of these pamphlets attention is called to the forms of coiled pipes manufactured by this concern for condensers, refrigerating plants, etc. The second pamphlet illustrates and describes the American Feed Water Heater, the American Purifier and other forms of heaters, also a novel form of power pump.

CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

Bids to be opened.	Work.	Place.	See Eng. News.
Mar. 23.	Water-works extension,	Bloomington, Ind.	Mar. 2
	Advertised, Engineering News, Mar. 2.		
Mar. 23.	Water-works,	Windsor, N. Y.	Mar. 9
	Advertised, Engineering News, Mar. 9.		
Mar. 23.	Sprinkling wagons,	New York, N. Y.	Mar. 16
Mar. 23.	Hydrants, cocks, boxes, etc.,	New York	Mar. 16
Mar. 23.	Steam plant,	New York, N. Y.	Mar. 16
Mar. 23.	School building,	Monticello, Ind.	Mar. 16
Mar. 23.	Retaining walls,	Oneida, N. Y.	Mar. 16
	Advertised, Engineering News, Mar. 16.		
Mar. 23.	Plate-girder bridge,	Buffalo, N. Y.	Mar. 16
	Advertised, Engineering News, Mar. 16.		
Mar. 23.	Road roller (12 tons),	New York, N. Y.	Mar. 16
Mar. 24.	Electric plant,	Charlotte Harbor, N. Y.	Mar. 16
Mar. 24.	Bridge work,	Boston, Mass.	Mar. 16
	Advertised, Engineering News, Mar. 16.		
Mar. 24.	Sewer system,	Cienfuegos, Cuba	Mar. 9
	Advertised, Engineering News, Mar. 9.		
Mar. 24.	Water-works,	Cienfuegos, Cuba	Mar. 9
	Advertised, Engineering News, Mar. 9.		
Mar. 24.	Sewers,	Pontiac, Mich.	Mar. 2
	Advertised, Engineering News, Mar. 2.		
Mar. 24.	Sewer pipe,	Everett, Mass.	Mar. 23
Mar. 24.	Armory building work,	Syracuse, N. Y.	Mar. 23
Mar. 25.	Church building,	Oshawa, Ont.	Mar. 23
Mar. 25.	Electrical machinery,	Chicago, Ill.	Mar. 23
Mar. 25.	Sewer pipe, etc.,	Wheeling, W. Va.	Mar. 23
Mar. 25.	Brick paving and grading,	Kansas City, Mo.	Mar. 23
Mar. 25.	Pumping engines and boilers,	Bristol, Eng.	Mar. 9
Mar. 25.	School building,	Cleveland, O.	Mar. 9
Mar. 25.	Plate-girder bridge,	North Adams, Mass.	Mar. 9
	Advertised, Eng. News, Mar. 9 and 16.		
Mar. 25.	Equipment electric commission,	Baltimore.	Mar. 16
Mar. 25.	Sewerage system,	Prescott, Ont.	Mar. 16
Mar. 25.	Water-works,	Prescott, Ont.	Mar. 16
Mar. 27.	Water pipe, etc.,	Laporte, Ind.	Mar. 16
	Advertised, Engineering News, Mar. 16.		
Mar. 27.	School building,	New York, N. Y.	Mar. 16
Mar. 27.	Bank building,	Winnipeg, Man.	Mar. 16
Mar. 27.	Electric plant,	Santa Fe, N. Mex.	Mar. 9
Mar. 27.	Sewer and water pipe,	Lockport, N. Y.	Mar. 9
Mar. 27.	Court house,	Leesville, La.	Jan. 26
Mar. 27.	Paving brick,	Nebraska City, Neb.	Mar. 16
Mar. 27.	Railway,	Glasgow, Scotland	Mar. 23
Mar. 27.	Retractile draw,	Boston, Mass.	Mar. 23
Mar. 27.	Tramway (2¾ miles),	Dublin, Ireland	Mar. 23
Mar. 27.	Water bonds,	Kettle Falls, Wash.	Mar. 23
Mar. 27.	Steam road roller,	St. Louis, Que.	Mar. 23
Mar. 27.	Hardware, etc.,	New York, N. Y.	Mar. 23
Mar. 27.	General supplies,	Toronto, Ont.	Mar. 23
Mar. 28.	Water department supplies,	Reading, Pa.	Mar. 23
Mar. 28.	Electric wiring,	Kansas City, Mo.	Mar. 23
Mar. 28.	Heater at water-works,	Camden, N. J.	Mar. 23
Mar. 28.	Asphalt paving,	Buffalo, N. Y.	Mar. 23
Mar. 28.	Repairing asphalt paving,	Rochester, N. Y.	Mar. 23
Mar. 28.	Brick paving,	Bellefontaine, O.	Mar. 23
Mar. 28.	Dredging and dockwork,	Chicago, Ill.	Mar. 2
	Advertised, Eng. News, Mar. 2 to 23.		
Mar. 28.	Water-works,	Darlington, Okla.	Mar. 9
Mar. 28.	Pipe sewers,	Kearney, N. J.	Mar. 9
Mar. 29.	Water-works pump,	South Bend, Ind.	Mar. 9
Mar. 29.	Sidewalks,	Sandusky, O.	Mar. 16
Mar. 29.	Drainage pipe, etc.,	Wapakoneta, O.	Mar. 23
Mar. 29.	Sewers,	Chicago, Ill.	Mar. 23
Mar. 29.	Paving,	Nantucket, Mass.	Mar. 23
Mar. 29.	Asphalt paving,	Hartford, Conn.	Mar. 23
Mar. 29.	Grading,	West Hoboken, N. J.	Mar. 23
Mar. 29.	Laying water mains,	Chicago, Ill.	Mar. 23
Mar. 30.	School building,	Brooklyn, N. Y.	Mar. 23
Mar. 30.	Highway bridges (3),	Urbana, Ill.	Mar. 23
Mar. 30.	School building,	Honolulu, Hawaii	Mar. 23
Mar. 30.	Electric lighting,	Defiance, O.	Mar. 23
Mar. 30.	Asphalt paving,	Reading, Pa.	Mar. 23
Mar. 30.	Garbage disposal,	Providence, R. I.	Mar. 16
Mar. 30.	Public building work,	San Francisco, Cal.	Mar. 2
	Advertised, Eng. News, Mar. 2 and 9.		
Mar. 30.	Jail building,	Uvalde, Tex.	Mar. 9
Mar. 31.	Electric plant,	Springfield, N. S.	Mar. 9
Mar. 31.	Garbage disposal,	Rochester, N. Y.	Mar. 2
Mar. 31.	Telephone concessions,	Shanghai, China.	Nov. 24
	Advertised, Eng. News, Nov. 17 to Dec. 8.		
Mar. 31.	Bridge work,	Minneapolis, Minn.	Mar. 16
Mar. 31.	Sewers,	East Cleveland, O.	Mar. 16
Mar. 31.	Sewers,	Minneapolis, Minn.	Mar. 16
Mar. 31.	Water pipe, etc. (460 tons),	Minneapolis	Mar. 16
Mar. 31.	Paving,	Bellefontaine, O.	Mar. 16
Mar. 31.	Plans for sewer system,	Aylmer, Que.	Mar. 23
Mar. 31.	Improving 27 alleys,	St. Louis, Mo.	Mar. 23
Apr. 1.	Electric lighting, etc.,	Jackson, O.	Mar. 23
Apr. 1.	Pvg blocks, sewer castings, etc.,	Athens, Ga.	Mar. 23
Apr. 1.	Brick paving,	Akron, O.	Mar. 23
Apr. 1.	Brick paving,	Tiffin, O.	Mar. 23
Apr. 1.	W.-wks and electric plant,	Cullman, Ala.	Mar. 9
Apr. 1.	Electric plant,	Palo Alto, Cal.	Mar. 16
Apr. 1.	Court house addition,	Louisville, Ky.	Mar. 16
Apr. 1.	Turnpike bonds,	Jackson, O.	Mar. 16
Apr. 1.	Light house,	Romer Shoal, N. Y. H.	Mar. 16
	Advertised, Eng. News, Mar. 16 and 23.		
Apr. 1.	Viaduct substructure,	St. Joseph, Mo.	Jan. 5
Apr. 1.	Opera house,	Columbus, Ga.	Jan. 19
Apr. 1.	Hydraulic dredge,	Rock Island, Ill.	Mar. 9
	Advertised, Eng. News, Mar. 9 to 30.		
Apr. 1.	Brick and pipe sewers, etc.,	Havana, Ill.	Mar. 9
	Advertised, Engineering News, Mar. 9.		
Apr. 1.	Fire hydrants,	Washington, D. C.	Mar. 9
	Advertised, Engineering News, Mar. 9.		
Apr. 1.	Water-works,	Goldhill, Ore.	Mar. 9
Apr. 1.	Bridges,	Columbus, O.	Mar. 9
Apr. 2.	Electric plant, etc.,	Keota, Ia.	Mar. 23
Apr. 2.	Pump, etc.,	Keota, Ia.	Mar. 23
Apr. 3.	Repairing bdge approach,	Ellensburg, Wash.	Mar. 23
Apr. 3.	Heating apparatus,	Clifton Heights, Pa.	Mar. 23
Apr. 3.	Bridge work,	Grand Forks, N. Dak.	Mar. 23
Apr. 3.	Brick paving (2 streets),	Albany, N. Y.	Mar. 23
Apr. 3.	Jail,	Alturas, Cal.	Mar. 23
Apr. 3.	Paving,	Paterson, N. J.	Mar. 23
	Advertised, Eng. News, Mar. 23 and 30.		
Apr. 3.	Brick paving,	Union City, Pa.	Mar. 23
Apr. 3.	School building,	Wells, Minn.	Mar. 9
Apr. 3.	Stop cocks, pipe, etc.,	Winnipeg, Man.	Mar. 9
Apr. 3.	Pumps (2),	Winnipeg, Man.	Feb. 9
Apr. 3.	Market plans,	Toronto, Ont.	Mar. 2
Apr. 3.	Brick and pipe sewers,	Whiting, Ind.	Mar. 16
Apr. 3.	Pipe sewers,	Plainfield, N. J.	Mar. 16
	Advertised, Engineering News, Mar. 16.		
Apr. 3.	School building,	Lakota, N. Dak.	Mar. 16
Apr. 3.	Bridge,	Kalama, Wash.	Mar. 16
Apr. 3.	Steam launch,	Boston, Mass.	Mar. 16
Apr. 4.	Electric railway,	Madrid, Spain.	Mar. 2
Apr. 4.	Electric plant,	New York, N. Y.	Mar. 9
Apr. 4.	City prison work,	New York, N. Y.	Mar. 9
Apr. 4.	Electric plant,	Picton, Ont.	Mar. 16
Apr. 4.	Pratt truss bridge,	Sidney, O.	Mar. 23
Apr. 4.	Stand-pipe, and water pipe,	Berea, O.	Mar. 23

Apr. 4. Street surfacing, Clinton, Mass. ..... Mar. 23
Advertised, Eng. News, Mar. 23 and 30.
Apr. 4. Grubbing, excavating, etc., Clinton, Mass. Mar. 23
Advertised, Eng. News, Mar. 23 and 30.
Apr. 4. Road machines (6), Colfax, Wash. ..... Mar. 23
Apr. 4. School building, Ellsworth, Minn. ..... Mar. 23
Apr. 4. School building, Irvington, N. J. ..... Mar. 23
Apr. 4. Bolts, nuts, boilers, etc., New York ..... Mar. 23
Apr. 4. Railway grading, Clinton, Mass. ..... Mar. 23
Advertised, Eng. News, Mar. 23 and 30.
Apr. 5. School building, Cohoes, N. Y. ..... Mar. 23
Apr. 5. Hospital building plans, Auburn, Cal. ..... Mar. 23
Apr. 5. Plans for steel cells, Auburn, Cal. ..... Mar. 23
Apr. 5. Steel and wooden bridges, Dakotah, Ia. ..... Mar. 23
Apr. 5. Bridge, Goldbeach, Ore. ..... Mar. 23
Apr. 5. Water-works, etc., Mayville, N. Dak. ..... Mar. 23
Apr. 5. Electric plant, Mayville, N. Dak. ..... Mar. 23
Apr. 5. Macadam paving, Newton, N. J. ..... Mar. 23
Apr. 5. Boiler (300-HP.), Newport, Ky. ..... Mar. 23
Apr. 5. Excavating, Vicksburg, Miss. ..... Mar. 9
Advertised, Eng. News, Mar. 9 to 30.
Apr. 5. Steel bridge, Columbus, O. ..... Mar. 16
Apr. 5. Asphalt plant and wagons, Winnipeg ..... Mar. 16
Apr. 6. Submerged sewer, New London, Conn. ..... Mar. 16
Advertised, Engineering News, Mar. 16.
Apr. 6. County roads, Ukiah, Cal. ..... Mar. 16
Apr. 6. Pipe sewers, New London, Conn. ..... Mar. 16
Advertised, Engineering News, Mar. 16.
Apr. 6. Dredging boat, Sabine Pass, Tex. ..... Feb. 9
Apr. 6. Culvert and cem., Pittsburg Landing, Tenn. Mar. 23
Apr. 6. Street railway, Cleves, O. ..... Mar. 23
Apr. 7. Street sprinkling, St. Louis, Mo. ..... Mar. 23
Apr. 7. Water pipe, etc., Austin, Minn. ..... Mar. 23
Advertised, Engineering News, Mar. 23.
Apr. 7. Improving 25 alleys, St. Louis, Mo. ..... Mar. 23
Apr. 7. Ditch and bridge bonds, Bellefontaine, O. ..... Mar. 16
Apr. 7. Bridge at Center St., Cleveland, O. ..... Mar. 16
Apr. 7. Gas lighting, Cleveland, O. ..... Mar. 16
Apr. 8. Water pipe, etc., Butte, Mont. ..... Mar. 16
Advertised, Engineering News, Mar. 16.
Apr. 8. Valves, castings, etc., Butte, Mont. ..... Mar. 16
Advertised, Engineering News, Mar. 16.
Apr. 8. Extending electric plant, Norfolk, Va. ..... Mar. 16
Apr. 8. Artesian well, Fort McPherson, Ga. ..... Mar. 16
Apr. 8. Water bonds, Mankato, Kan. ..... Mar. 23
Apr. 8. Extending tunnel, etc., Ontario, Cal. ..... Mar. 23
Apr. 8. Street railway, Home City, O. ..... Mar. 23
Apr. 8. Sidewalks, etc., Youngstown, O. ..... Mar. 23
Apr. 10. Bonds, Salem, O. ..... Mar. 23
Apr. 10. Cement sidewalks, Crawfordsville, Ind. ..... Mar. 23
Apr. 10. Gravel roads, Bedford, Ind. ..... Mar. 23
Apr. 10. Asphalt paving, Lafayette, Ind. ..... Mar. 23
Apr. 10. Brick paving, etc., Des Moines, Ia. ..... Mar. 23
Apr. 10. Bridges (2), Chicago, Ill. ..... Feb. 23
Advertised, Engineering News, Feb. 23.
Apr. 10. Ditch, piling and rip-rap, Fremont, Neb. ..... Mar. 2
Apr. 10. Arc lights, Dayton, O. ..... Mar. 2
Advertised, Eng. News, Mar. 2 and 9.
Apr. 10. Boilers for w.-wks (4), Montgomery, Ala. Mar. 16
Advertised, Eng. News, Mar. 16 to Apr. 6.
Apr. 10. Water tank, Fort Mojave, Ariz. ..... Mar. 16
Apr. 11. Pumping engines (2), Philadelphia, Pa. ..... Mar. 9
Apr. 11. Paving, etc., Huntington, Ind. ..... Mar. 9
Apr. 11. Brick paving, Schenectady, N. Y. ..... Mar. 23
Apr. 11. Jail cells, Anaconda, Mont. ..... Mar. 23
Apr. 12. Castings, water pipe, etc., Cincinnati, O. ..... Mar. 23
Apr. 12. Paving, Salem, O. ..... Mar. 23
Apr. 12. Water-works, Mankato, Kan. ..... Mar. 23
Apr. 12. Maps and plats, Pomeroy, O. ..... Mar. 9
Apr. 12. Dam and weirs, Cincinnati, O. ..... Mar. 16
Advertised, Eng. News, Mar. 16 to Apr. 6.
Apr. 12. Additions water-works, Seattle, Wash. ..... Mar. 16
Advertised, Eng. News, Mar. 16 and 23.
Apr. 13. Steam heating plant, Grand Junction, Colo. Mar. 23
Apr. 13. Steam heating, St. Paul, Minn. ..... Mar. 23
Advertised, Eng. News, Mar. 23 and 30.
Apr. 13. Hydraulic canal, Great Bend, N. Y. ..... Mar. 23
Advertised, Eng. News, Mar. 23 and 30.
Apr. 14. Brick paving, etc., Waukesha, Wis. ..... Mar. 23
Advertised, Eng. News, Mar. 23 and 30.
Apr. 14. Heating, etc., Louisville, Ky. ..... Mar. 16
Apr. 14. Hall building, Bradford, England ..... Jan. 19
Apr. 15. Sewer material, etc., Honolulu, H. I. ..... Feb. 23
Advertised, Eng. News, Feb. 23 and Mar. 2.
Apr. 15. Hospital building, Birmingham, Ala. ..... Mar. 9
Apr. 15. Water-works, Forestport, N. Y. ..... Mar. 9
Apr. 15. Branch sewer, Sandusky, O. ..... Mar. 16
Apr. 15. Sewers, etc., Carrollton, Mo. ..... Mar. 16
Apr. 15. Water-works, Golden, Colo. ..... Mar. 16
Apr. 15. Paving, etc., and bonds, Carrollton, Mo. ..... Mar. 16
Apr. 15. Pumping engine, Montgomery, Ala. ..... Mar. 23
Advertised, Eng. News, Mar. 23 to Apr. 13
Apr. 15. Paving, Akron, O. ..... Mar. 23
Apr. 15. Bridge, Hartford, Conn. ..... Mar. 23
Advertised, Eng. News, Mar. 23 and 30.
Apr. 15. Ditch (30,000 cu. yds.), Wapakoneta, O. ..... Mar. 23
Apr. 17. Garbage crematory, Louisville, Ky. ..... Mar. 23
Apr. 17. Water-works, Lakeport, Cal. ..... Mar. 23
Advertised, Engineering News, Mar. 23.
Apr. 17. Electric light franchise, Napa, Cal. ..... Mar. 23
Apr. 17. Paving, Bridgeport, O. ..... Mar. 23
Apr. 17. Brick paving, Toledo, O. ..... Mar. 23
Apr. 17. Macadam roads, Risingsun, Ind. ..... Mar. 23
Apr. 17. Brick paving, Portland, Ind. ..... Mar. 23
Apr. 17. Cement, stone, etc., Marquette, Mich. ..... Mar. 23
Advertised, Eng. News, Mar. 23 to Apr. 13.
Apr. 17. Levee (11 miles), West Memphis, Tenn. ..... Mar. 16
Advertised, Eng. News, Mar. 16 to Apr. 6.
Apr. 17. Public building work, San Francisco, Cal. ..... Mar. 16
Apr. 18. Arch culverts, Chicago, Ill. ..... Mar. 16
Advertised, Eng. News, Mar. 16 to Apr. 6.
Apr. 18. Pipe culverts (9), Chicago, Ill. ..... Mar. 23
Apr. 20. Excavating, New Orleans, La. ..... Mar. 23
Apr. 23. Steel bridge, Raleigh, N. C. ..... Mar. 23
Apr. 25. Park bonds, Cleveland, O. ..... Mar. 23
Apr. 28. Reservoirs (5), Cincinnati, O. ..... Mar. 23
Apr. 29. Building plans, New Haven, Conn. ..... Mar. 23
May 10. Swing railroad bridge, Chicago, Ill. ..... Mar. 23
May 25. Sewer system, Johannesburg, S. Africa ..... Mar. 9
June 1. Plans for market, Leeds, England ..... Feb. 16
June 30. Electric r'y (23 miles), Shanghai, China. Mar. 2
Advertised, Eng. News, Nov. 17 to Dec. 8.
Oct. 1. Electric street railway, Moscow, Russia ..... Mar. 9
No date. Railway, Norfolk, Va. ..... Mar. 16
Advertised, Eng. News, Mar. 16 and 23.
" . Pumping plant, Orange, N. J. ..... Mar. 16
Advertised, Eng. News, Mar. 16 and 23.
" . Electric plant, etc., Orange, N. J. ..... Mar. 16
Advertised, Eng. News, Mar. 16 and 23.
" . Excavating, Harvey, Ill. ..... Mar. 9
Advertised, Eng. News, Mar. 9 to 23.
No date. Fireproof record building, Jackson, N. C. ..... Mar. 23

RAILWAYS.

AFRICA.—Press reports state that arrangements are being made between the German Government and Cecil Rhodes, the British South African magnate, for the construction of a telegraph line in German East Africa, and for building a railway through the same territory.

ATKINSON & NORTHERN.—Contracts have been let to a Chicago construction company, represented by Don J. Barnes, Atkinson, Neb., according to reports, for building this proposed line from Atkinson to Perry, about 25 miles; work was to begin at once. A. A. Perry, Gen. Mgr., Atkinson.

BALTIMORE & OHIO.—L. B. McCabe & Bros., Baltimore, Md., are said to have been awarded the contract for the improvements on the Wheeling division of this line, including the construction of a long double track tunnel at Whitehall summit, at about $400,000. Nearly 70,000 cu. yds of rock will have to be blasted out of the hills for the two tunnels, and over 250,000 cu. yds. of rock and earth will have to be removed to provide approaches. This is exceedingly heavy work, and a large force of men will be necessary to carry it on. The tunnels will be lined with brick, and will cost about $300,000. Considerable blasting will be necessary for the approaches, as the country is rocky, and it is estimated that in this work $150,000 will be spent.

BRAINERD & NORTHERN MINNESOTA.—A preliminary survey for the extension of this line from Bemidji north towards Nebish, Minn., has just been completed. A dock is now being built by the company on the east side of Lake Irvine for loading logs on cars to be taken to the Brainerd Lumber Co.'s mill at Brainerd. O. O. Winter, Gen. Mgr., Brainerd, Minn.

BROOKFIELD.—This company has been incorporated in Ohio with $10,000 capital stock, to build a steam or electric railway from Brookfield township northerly to a point on the Mahoning Coal Co.'s line. Jas. V. Rose, Reese J. Erman and John J. Davis are incorporators.

CENTRAL OF GEORGIA.—H. M. Comer, Pres., Savannah, Ga., informs us that this company is now extending its tracks from Covington to Porterdale, Ga., four miles.

CHICAGO & NORTHWESTERN.—We are informed that the right of way has been obtained and one-half of the grading completed for the Boyer Valley extension of this line from Wall Lake to Dennison, Ia., 26 miles. The material is all on hand, and the work will be done under a dozen or more small contracts. The material is also on hand and grading has begun on the proposed Soldier Valley Extension from Mondamin to Wall Lake, via Ute, 62 miles. The contractors are: Mitchell Vincent, Onawa, Ia.; Burke Bros., West Superior, Wis.; McArthur Bros., Chicago, Ill. Bridging on both of the above lines has been let to T. A. Kearns, Chicago. D. C. Dunlap, Engr. of Location and Construction; C. H. Lichty, Asst. Engr., both of Wall Lake, Ia.

CHICAGO & WEST WISCONSIN.—This company, formerly known as the Chicago, Montello & Northwestern, has revived the project of building a line from Princeton to Wautoma, via Germania and Neshkoro, Wis., about 50 miles. J. L. Pennifill, Pres., Princeton, Wis.

CHICAGO, MILWAUKEE & ST. PAUL.—C. A. Goodnow, Asst. Gen. Supt., Chicago, Ill., informs us that this company is changing the grades and cutting down the hills on the Eastern Iowa division between Preston and Marion, Ia., requiring the easement of 900,000 cu. yds. of earth; work to be completed this year. The double track between Savanna, Wis., and Sabula, Ia., the grading for which was done this winter, will be completed about May 1. This will provide a double track from the Mississippi River to Chicago. Extensive improvements are also contemplated on the Dubuque, Minnesota and La Crosse divisions. Forty miles of 75-lb. steel rails will be laid on the Kansas City division this year, and ballasting continued. Reports state that the contract for constructing 36 miles of track between Riggs and Marion Junction has been let to Campbell & Ferguson, Chicago.

FORT DODGE & OMAHA.—Wickham Bros. are reported to have received the sub-contract for six miles of grading on this extension of the Illinois Central R. R. from Tara to Carnarvon, Ia., 40 miles. C. E. Loss & Co., Pullman Bldg., Chicago, are the general contractors.

IOWA CENTRAL.—Balch & Peppard, Minneapolis, Minn., are reported to have been awarded the contract for the grading and bridging of the proposed extension from Belmont to Algona, Ia. Work will begin as soon as weather is favorable. L. M. Martin, Ch. Engr., Marshalltown, Ia.

JACKSONVILLE SOUTHWESTERN.—This company was incorporated in Florida, March 15, with $450,000 capital stock, to build from Cummer's mill, near Jacksonville, through the counties of Duval, Baker, Bradford, Alachua and Levy, to Manatee, Fla., on the Suwannee River, 103 miles. The incorporators are: Jacob Cummer, W. W. Cummer, W. E. Cummer and Arthur G. Cummer.

KANSAS, MISSOURI & NORTHERN.—R. A. Reese, Vice-Pres. and Gen. Mgr., Lincoln Trust Bldg., St. Louis, Mo., informs us that contract will be let about April 15 for the construction of this line from St. Joseph to Council Bluffs, Ia., and Omaha, Neb., via Savannah, Fillmore, Maitland, Tarkio, Riverton and Sidney. 130 miles. A preliminary survey has been made, a $50,000 bonus voted and free right of way promised from Savannah to Tarkio. The capital for construction has been arranged for and will be ready when required. Robt. S. Doubleday, Pres.; C. C. Brown, Ch. Engr., St. Louis.

KANSAS, OKLAHOMA CENTRAL & TEXAS.—This company was incorporated in Oklahoma, March 14, with a capital stock of $5,000,000, to build from Salina, Kan., to New Kiowa and Oklahoma City to Denison, Tex., to have a total length of 650 miles. I. P. Hamilton, Salina, Kan.; G. N. Moses, Great Bend, Kan., and C. A. McBrian, Watonga, Okla., are directors, with general office at Watonga.

LOUISVILLE & NASHVILLE.—Surveys are under way, according to reports, for an extension from Selma to Yolande, Ala., on the Birmingham Terminal, thus giving this company a straight route from Birmingham, Ala., to Pensacola, Fla. A 40-mile extension, known as the Southern Alabama Ry., from Pineapple to Repton, Ala., is now being constructed by R. M. Quigley & Co., St. Louis, and their sub-contractors. R. Montfort, Ch. Engr., Louisville, Ky.

MASSACHUSETTS.—Bids are asked by the Metropolitan Water Board, Boston, until April 4, for grading a short section of railway in the Wachusett Reservoir, as stated in our advertising columns. F. P. Stearns, Ch. Engr.

MISSOURI MIDLAND.—Daniel B. Ely, Vice-Pres. and Gen. Mgr., St. Louis, Mo., informs us that the contract for the complete construction of this steam railway from Columbia to Kennard, Mo., 9½ miles, was awarded Feb. 25 to Johnson Bros. & Faught, St. Elmo, Ill. There will be 13 bridges and considerable rock work and excavation. Charles Wiggins, Pres.; A. G. Kleinbeck, Ch. Engr., 404 Bank of Commerce Bldg., St. Louis.

NAZARETH & LEHIGH.—Incorporated in Pennsylvania, with a capital stock of $10,000, to build a line of steam railway from the terminal of the Bangor & Portland Ry. at Nazareth, Pa., to a point about one mile west to a siding near the new cement mills. Conrad Miller, Pres., Nazareth; D. C. Blair, New York; G. W. Mackey.

PARAGUAY.—Consul John N. Ruffin, Asuncion, Paraguay, reports that this country offers a good opportunity for building 300 kilometers (186 miles) of railway between Ignatimi and Rosario, with a 6% guaranty.

SANTA FE TERMINAL OF CALIFORNIA.—Incorporated in California, with $1,000,000 capital stock, to build railways, terminals, etc. A. H. Payson, San Mateo, Cal.; W. A. Bissell, San Francisco, directors.

SCOTLAND.—Bids are asked until March 27 for the construction of part of the Edinburgh, Leith & Newhaven extension of the Caledonian Ry. George Graham, Ch. Engr., Buchanan St. Station, Glasgow, Scotland.

SIERRA RY. OF CALIFORNIA.—We are informed that all the contracts have been let for extending this line from Sonora to Carters, Cal., 14 miles. The line was originally built from Oakville to Jamestown and an extension from Jamestown to Sonora was completed and opened July 25. Prince A. Poniatowski, Pres., San Francisco, Cal.; W. C. Potts, Ch. Engr., Jamestown, Cal.

SOUTH CAROLINA & GEORGIA.—Official reports state that surveys are under way for an extension of this line from Gaffney to Clifton, S. C., about 12 miles, and that construction is expected to be begun this spring. C. S. Phelps, Engr., Charleston, S. C.

UNION PACIFIC.—Kilpatrick Bros. & Collins, Newcastle, Wyo., are reported to have received the contract for grading the cut-offs on the main line of the Union Pacific between Hutton Station and Dana, Wyo., work to be completed by Nov. 1. The work is expected to be very heavy because of the width of the road, which will require about 120,000 cu. yds. of earthwork a mile; it will be in three sections, aggregating 47 miles. J. B. Berry, Ch. Engr., Omaha, Neb.

WICHITA & SOUTHERN.—O. H. Bentley, Pres., Wichita, Kan., informs us that a preliminary survey has been made over a portion of this proposed line from Wichita to Dennison, via South McAlester, Tex., 200 miles, and that 50 miles will probably be built this season. Right of way across the Indian reservations has been asked of Congress and bills are now pending. H. L. Jackson, Ch. Engr., Wichita.

STREET AND ELECTRIC RAILWAYS.

BOSTON, MASS.—Governor Walcott of Massachusetts has signed the bill extending the time for the construction of the Boston, Quincy & Fall River Bicycle Ry., under which 20 miles of line must be completed before July 1, 1900. E. Moody Boynton, Newburyport, Mass.

GREENFIELD, MASS.—The Greenfield & Turners Falls St. Ry. Co. has been petitioned by the people of Montague Centre and Turners Falls to assist in the construction of a line from the present terminus at Lake Pleasant to Montague Centre. Frank E. Lowe, Pres. and Mgr.

MIDDLETOWN, CONN.—The Middletown St. Ry. has applied to the legislature for a charter granting the power of extending its lines to Meriden. J. A. Kelsey, Pres.

BALLSTON, N. Y.—The Saratoga Traction Co. has been granted a franchise by the trustees of this village to build on Malta Ave.; work is expected to begin at once, and be completed by July 1. R. E. Dunston, Mgr., Saratoga Springs, N. Y.

BROADALBIN, N. Y.—Wallace Cleveland, Broadalbin, and Seymour Husted, Brooklyn, N. Y., are reported to be interested in the construction of an electric railway between Broadalbin and Amsterdam.

GREENBUSH, N. Y.—Reports state that the proposed electric railway between Rensselaer, Nassau, Kinderhook and Hudson, for the construction of which Belden & Seeley, Syracuse, N. Y., are said to have the contract, will be controlled by the Columbia & Rensselaer Ry., Light & Power Co., formed by the consolidation of the local companies of the towns through which it will pass. Roswell P. Flower, New York, is said to be interested.

DUNKIRK, N. Y.—Frederick H. Stevens, C. J. Carney and others have petitioned the council for a franchise to construct an electric line to Hickoryhurst or Point Gratiot Park, summer resorts.

HERKIMER, N. Y.—The village trustees granted a franchise to the Little Falls & Herkimer St. Ry. Co., March 11, to build and operate in Herkimer. John V. Quackenbush, Pres., Little Falls, N. Y.

MINEOLA, N. Y.—The Nassau Belt Line Traction Co. was incorporated, with a capital stock of $300,000, March 20, to operate 30 miles of street railway to be propelled by any other motive power than steam, from Mineola to Long Beach, Nassau county. The directors are: Henry L. Nichols, Hempstead; J. W. Denlott, Rockville Center, N. Y.; W. G. Miller, Freeport, N. Y.; Austin Cornwell, Oceanside, N. Y., and others. The principal office will be at Hempstead, N. Y.

NIAGARA FALLS, N. Y.—The Niagara Falls & Suspension Bridge Ry Co. has applied for a franchise to lay tracks on various streets in this city. J. T. Jones, Pres.

BRIDGETON, N. J.—The Bridgeton & Millville Traction Co. is about to award contracts for extending its line through Cedarville. Work is expected to begin as soon as the materials can be secured.

BETHLEHEM, PA.—The Bethlehem & Freemansburg St. Ry. Co. was incorporated, March 16, with $21,000 capital stock, to build an electric street railway from Bethlehem to Butztown, Northampton county, 3¼ miles. The incorporators are: M. P. McGrath, Pres., Worcester, Mass.; Thos. A. H. Hay, Easton, Pa.; C. H. Cox.

COKEVILLE, PA.—The Coke Belt St. Ry Co. was incorporated March 17, with $600,000 capital stock, to build 30 miles of electric railway through Westmoreland and Fayette counties, Pa.; Wm. H. Allen, Pres., Pittsburg, Pa., and F. S. Young, Wilkinsburg, Pa., are incorporators.

EASTON, PA.—The Northampton Southern St. Ry. Co. was incorporated March 16, with $36,000 capital stock, to build six miles of electric railway between Easton and Middletown, Northampton county. Chas. H. Cox, Pres., Bethlehem, Pa., and M. P. McGrath, Worcester, Mass., are incorporators.

NAZARETH, PA.—The Worcester Construction Co., Worcester, Mass., is reported to have been awarded the contract for building the Northampton Central St. Ry., from Nazareth to Farmersville, 4½ miles, to connect at the latter place with the Easton, Palmer & Bethlehem St. Ry. Chas. A. Richardson, Pres., Worcester, Mass.

WILMINGTON, DEL.—It is reported that the Wilmington & New Castle Electric Ry. Co. has decided to extend its lines to Delaware City, nine miles from New Castle. F. H. Treat, Pres.

ARLINGTON, VA.—Gen. Samuel S. Burdett, Glencarlyn; Joseph E. Willard, Fairfax, and others are said to be interested in the immediate construction of an electric railway from Arlington Junction to Fairfax and Manassas, via Glencarlyn and Falls Church.

HUNTSVILLE, ALA.—T. W. Pratt has applied to this city for an electric street railway franchise, offering to have three miles of line in operation within 60 days.

CHILLICOTHE, O.—The Chillicothe, Bainbridge & Hillsboro Electric Ry. Co. was incorporated March 16, with $1,000 capital stock, to build from Chillicothe to

Millsboro. The incorporators are: J. K. Duffy, T. S. Mitchell, J. F. Harmon, Samuel Ryland and F. C. Jeffreys.

CLEVELAND, O.—It is reported that the Cleveland & Warren Electric Ry. Co. has been chartered, with $10,000 capital stock, to build eventually about 50 miles of line in Cuyahoga, Genauga, Portage and Trumbull counties. Martin Dodge, Gen. Mgr., Chagrin Falls, O.

CLEVES, O.—Bids are asked by this village until April 6 for the construction and operation of a street railway through Cleves, to be in operation before Jan. 1. V. M. Henderson, Village Clk.

FINDLAY, O.—The Findlay St. Ry. Co. is said to contemplate extending its lines to Mortimer, Van Buren and possibly to Fostoria; estimated cost, $50,000. A new 250-HP. boiler has recently been bought from the Turner Boiler Co., Bucyrus, O. C. F. Smith, Mgr.

HOME CITY, O.—Bids are asked by this village until April 8 for the construction and operation of a street railway in Home City. J. O. Falkenburg, Village Clk.

OXFORD, O.—The Richmond, Oxford, Reily & Cincinnati Electric R. R. Co. has been organized at Oxford by M. T. Morris, Shannon, O.; S. B. Frye, St. Charles, and others. A survey will be made at once.

PHONETON, O.—The National Traction Co. of Phoneton has been incorporated with $10,000 capital to build along the old National Road from Columbus to the state line. J. O. H. Hooker and O. P. Waymire are incorporators.

XENIA, O.—The council has granted a franchise to the Dayton, Spring Valley & Wilmington Traction Co., of which J. M. Wilson is the promoter.

KOKOMO, IND.—The Kokomo Ry. & Light Co. was incorporated, March 13, with $80,000 capital stock, to operate in Kokomo. Wm. P. Stevens and H. L. Woolfenden are directors.

LEBANON, IND.—The commissioners of Boone county have granted a franchise to the Commercial Club of Lebanon down the Frankford Road to Lebanon and to the county line.

AURORA, ILL.—The Aurora, Wheaton & Chicago Ry. Co. was incorporated March 11, with $1,500,000 capital stock, to build an electric line from Aurora to Chicago. B. Mahler, M. J. Mandelbaum, L. J. Wolf, directors.

OTTAWA, ILL.—The Ottawa Ry., Light & Power Co. was incorporated March 16, with $150,000 capital stock, by F. S. Donnell, Louis W. Hess and Jacob I. Warner.

ST. JOSEPH, MO.—W. E. Montague, Surveyor of Platte County, has applied to the Buchanan county court for a franchise to build between St. Joseph and St. Louis.

TACOMA, WASH.—Reports state that the Tacoma Ry. & Power Co. has applied to the county commissioners for a franchise to extend its lines from Center St. to American Lake. Frank Dame, Supt.

QUEBEC, QUE.—It is announced that the contract for the equipment of an electric railway between Quebec and Ste. Anne de Beaupre, via Montmorency Falls and Beauport, 28 miles, has been awarded to Ahearn & Soper, Ottawa, Ont. The railway has hitherto been operated by steam, and the change will necessitate the manufacture of a number of large cars by the Ottawa Car Co. and the installment of a large electrical plant.

HAVANA, CUBA.—The Havana Electric Ry. Co. of New Jersey has increased its capital stock from $5,000,000 to $10,000,000. It is said that 25 miles of additional street railway track will be built. Col. G. B. M. Harvey, New York, is a director.

DUBLIN, IRELAND.—Bids are asked until March 27 for the construction of about 2¾ miles of tramway through fields, etc., for the Great Northern Ry. Co. T. Morrison, Secy., Dublin.

ELECTRIC LIGHT AND POWER.

KENNEBUNK, ME.—Estimates have been submitted for a new plant to cost about $5,500.

EAST HARTFORD, CONN.—Ex-Mayor Wm. W. Hyde and Percy S. Bryan, Hartford, have been authorized to prepare a new bill permitting the East Hartford fire district to purchase the plant, water-works, etc.

NEW LONDON, CONN.—Wm. T. May, Chn. Com., writes us that the matter of a city electric light plant has been referred to a committee to report at the next council meeting. Nothing can be done for two years, as the city would have to get a charter or buy the plant of the present company. C. G. Beckwith, Mayor.

SIMSBURY, CONN.—The act granting a charter to the Simsbury Electric Co. has passed both branches of the legislature.

WINDSOR LOCKS, CONN.—The Suffield Electric Lighting Co., it is stated, has been organized and will build a plant about three miles from here to supply this place with light.

ADDISON, N. Y.—It is stated that this place is to have a plant.

GREAT BEND, N. Y.—Bids are asked until April 13 for excavating about 300,000 cu. yds. of earth and rock for a hydraulic canal for the St. Regis Paper Co. as stated in our advertising columns. Frank A. Hinds, Engr., Flower Bldg., Watertown, N. Y.

ILION, N. Y.—N. A. Hanchett, Pres., writes us that this place voted recently by a large majority for a municipal plant. The town is already lighted by a private company. The vote is not conclusive, but only an expression of the people.

LYONS, N. Y.—Jacob Strauss, Lyons, writes us that an effort is being made to secure a franchise for a plant to have a capacity of 100 2,000-c.p. arc and 1,000-c.p. incandescent lights. A. B. Bishop, of Clyde, N. Y., and Rochester parties are reported as interested. The Lyons Electric Light & Power Co. has an exclusive franchise until March 6, 1901. This franchise, the new company says, was illegally granted.

NEW YORK, N. Y.—It is stated that the New York Gas & Electric Light, Heat & Power Co., with the gradual taking over of electric light and subway companies in Manhattan, has increased its capitalization from $25,000,000 to $72,000,000. It is understood to be the plan of the Whitney syndicate, owning this company, to generate at three or four large central stations all the electricity needed for lighting and heating purposes, and for the operation of the lines of the Metropolitan St. Ry. Co., which corporation is controlled by the same syndicate; to store in storage batteries manufactured by a Philadelphia company recently acquired by the syndicate the surplus power generated, as the dynamos will be run constantly, and to distribute its product by means of wires laid in the subways of the Empire City Subway Co. and the conduits which have been laid alongside the tracks of the Metropolitan company on many of its lines.

SYRACUSE, N. Y.—Mayor McGuire has recommended the city's ownership of the electric plant.——Certain improvements have been decided upon by the Syracuse Electric Light & Power Co. to its plant, to cost about $200,000. The plant in Fulton St., it is said, will have to be doubled in order to supply the demand for incandescent lights, and the additions will provide for 30,000 more lamps. For an additional station, $75,000 has been set aside. The addition will be a 3-story brick building about the same width as the present structure, and about 200 ft. deep. The cost of new machinery will be about $100,000. It is stated that the company will put its wires underground this spring.

ROCHESTER, N. Y.—Mayor Warner has made an address, urging the city's ownership of the electric plant.

CLAYTON, N. J.—The Pitman, Glassboro & Clayton Electric Light Co. has been granted a franchise to light this place. It will probably extend the lines to Bridgeport.

NEWARK, N. J.—At the meeting of the People's Light, Heat & Power Co., March 27, the plans for subways for its wires will be considered.

PAULSBORO, N. J.—It is stated that a company will be organized to build a plant here.

PRINCETON, N. J.—C. S. Robinson, the present owner of the plant, writes us that a company just formed will take the plant and enlarge it. Further information may be secured about April 1.

SEA ISLE CITY, N. J.—The Sea Isle City Electric Light & Power Co. has been awarded the contract for electric lighting.

BRIDGEPORT, PA.—The question of putting in a plant, to cost $30,000, is being considered, according to reports.

CONNEAUTVILLE, PA.—It is stated that plans for remodeling the power house are being prepared. D. F. Booth, Pres. Council; L. D. Corey, Clk.

PHILIPSBURG, PA.—It is stated that work will likely soon be begun on the proposed plant for the Philipsburg Electric Light Co. Capital stock, $25,000; directors, E. D. Pursel, John Ellenberg and David Gorgas.

ST. CLAIR, PA.—The council proposes to put in new boilers and to build a new smokestack at the electric plant.

SAYRE, PA.—Frank C. Roberts & Co., Engrs., Real Estate Trust Bldg., Philadelphia, have requested bids on a power house building to be erected at Sayre, for the Pennsylvania & New York Canal & R. R. Co. This will be steel skeleton, of brick construction, one story high, with truss roof and slate covering. The foundations will be concrete and brick, and machinery and the equipment to be installed will include four engines, two dynamos, generators, boilers, pumps, condensers, etc.

SOUTH BETHLEHEM, PA.—Bids were asked until March 20 for furnishing electric lights for five years from June 20. C. C. Boyer, Chn., 404 Wyandotte St.

ANNAPOLIS, MD.—Peter J. Carlin & Co., 186 Remsen St., Brooklyn, N. Y., have been awarded the contract for the power house, etc., at the academy.

BALTIMORE, MD.—Baldwin & Pennington, 44 South St., are preparing plans for an annex to the power house of the United Rys. & Electric Co. The addition will be 100 × 100 ft., and will have boilers and a 12,000-HP. engine.——Chas. E. Cassell, 404 Law Bldg., has completed plans for a combined store and power house, to cost about $1,000,000, for Posner Bros., Howard and Lexington Sts. It is likely that work may soon be begun.

BALTIMORE, MD.—The Wallace Co., West New Brighton, N. Y., has been awarded the contract for a portable railway for the electric subway commission, at $2,109. The contract for the electric plant at the Mount Royal pumping station has been let to Morton, Reed & Co., Baltimore, at $5,490.

WILLIAMSPORT, MD.—Jos. L. Motter, of the committee, writes us that work will be begun on the plant as soon as it is possible to do so. Estimated cost, $6,000. Geo. Thompson, Mayor.

PETERSBURG, VA.—The purchase of the street railways, electric light and water power companies located here was completed March 15, and a syndicate, of which Middendorf, Oliver & Co., German St., Baltimore, Md., are the managers, now own the properties. It is proposed to consolidate the companies into one corporation. The old companies are the Virginia Traction Co., the Piedmont Traction Co. and the Upper Appomattox Co., the latter controlling the water power on that river for 80 miles. The new corporation will be known as the Southside Railway Co.

MOUNDVILLE, W. VA.—Plans for a plant for the state prison have been completed; estimated cost, $6,000.

RAVENSWOOD, W. VA.—W. S. McKay and T. J. Moore have applied for separate franchises.

TARBORO, N. C.—An election will be held April 15 to vote on the question of issuing $50,000 in bonds for the plant, water-works, etc. J. A. Weddell, Cy. Clk.

AUSTELL, GA.—Estimates are reported as wanted for a plant to be operated by water power. C. J. Shelverton, Mayor.

FORSYTH, GA.—The question of putting in a plant is again being considered, according to reports.

ROME, GA.—H. M. Smith, Cy. Engr., writes us that the plant is to be owned and operated by the city. Nothing definite has yet been decided upon.

BIRMINGHAM, ALA.—The Consolidated Electric Light Co. has let a contract for two engines of 600 HP. each to the Birmingham Machine & Foundry Co., and that for the boilers to the Birmingham Boiler Works. The improvements to the plant will cost about $50,000.

EAUFAULA, ALA.—The question of a city plant is reported again being considered.

DEFIANCE, O.—Bids are asked until March 30 for lighting the streets with 75 arc lights for five or 10 years. M. W. Steinberger, Cy. Engr.——The city clerk writes us that the city will vote April 3 on the question of building a plant to cost $25,000.

JACKSON, O.—Bids are asked until April 1 for purchasing the plant owned by the city and for furnishing the city with electric lights. The plant is out of repair and gives unsatisfactory service. M. D. Jones, Cy. Clk.

UHRICHSVILLE, O.—The committee, consisting of Councilmen Greenlee, Cooper and Ross, is securing information for a plant to cost $16,000. C. A. Greenlee, Chn. Com., writes us that the question of issuing bonds will be voted upon in April.

CRAWFORDSVILLE, IND.—F. Hoffman, Cy. Engr., writes us that the council is considering the question of enlarging the plant. J. C. Hutton, Chn. Com.

EVANSVILLE, IND.—The Frank B. Rae Engineering Co., Fort Dearborn Bldg., Chicago, has been engaged to prepare plans for the proposed plant.

FORT WAYNE, IND.—The Jenney Electric Light & Power Co. has asked for a 50-year franchise.

SCHOOLCRAFT, MICH.—G. M. Hudson, Mayor, writes us that this place has voted against the proposition to put in a plant. The board wishes to grant a franchise and contract for lighting the town for 10 years with 25 arc lights.

DETROIT, MICH.—The public lighting commission has asked for an additional appropriation to put up 100 new arc lights and for new machinery to operate the plant.

ASHTON, ILL.—Geo. Schmidt, Mayor, writes us that nothing has been done towards securing a plant.

CHICAGO, ILL.—Bids are asked until 11 a. m., March 25, for supplying the department of electricity with the following: Two vertical high speed compound engines, direct connected to shaft; 1,000 arc lamps, series shunt, and 15 150-light arc belt driven dynamos. Edward B. Ellicott, Cy. Electrician.

EDWARDSVILLE, ILL.—J. H. Tun and B. H. Richards have been awarded the contracts for building the new power house for the Edwardsville Electric Light Co.

ELROY, WIS.—This place will soon vote on the question of a city plant or for a franchise.

WATERTOWN, WIS.—The council has decided not to build a plant and has extended the franchise of the Watertown Electric Light Co. for five years from next May.

DES MOINES, IA.—The question of lighting the parks by electricity is being considered by the park commissioners.

KEOTA, IA.—Bids are asked until April 2 by the Star Oatmeal Co., Keota, Ia., for constructing a plant to cost about $30,000. The plant will be operated by steam and will have a capacity of 600 or 700 incandescent lights. The company is to pump the water and to light the town. There will be required a 180-HP. Corliss engine, a high speed engine of 75-HP., two 70-HP. boilers, two 400-light dynamos, three-wire system, a pump of 200 or 250 gallons of water a minute, etc. Wm. J. Pugh, of Muscatine, Ia., may be addressed.

SEYMOUR, IA.—The question of issuing bonds for a plant will be voted upon March 27.

OSAKIS, MINN.—B. H. McCray has been granted a franchise for a plant. F. J. Herberger, Pres. Village.

SPARTA, MINN.—The question of building a plant is being considered, according to reports.

NORTHBEND, NEB.—This place will vote April 14 on the question of issuing bonds for a plant and water-works. Population, 1,300. J. H. Johnson, Mayor.

WYMORE, NEB.—A number of citizens propose to purchase the plant and property of the Wabaska Electric Co., which furnishes lights to this place and Blue Springs. If the plant is purchased the new owners will build a new power house at Holmesville, about five miles up the river.

MAYVILLE, N. DAK.—Bids are asked until April 5 for constructing a plant and water-works, according to reports. Samuel Torgerson, Cy. Audr.

ABERDEEN, S. DAK.—The city auditor writes us that nothing definite has been done towards securing a plant.

FULTON, MO.—G. T. Grancey, Clk., writes us that this place voted Feb. 21 to issue $10,000 in bonds. Of this amount $4,000 is to be used in buying a new engine and repairs to the plant. Bids for the purchase of the bonds are invited.

KANSAS CITY, MO.—Bids are asked until March 28 for a system of conduits, wiring, etc., for the post office. O. L. Spaulding, Acting Secy. Treasury Dept., Washington, D. C.

LITTLE ROCK, ARK.—The Little Rock Light & Power Co. has been absorbed by the Consumers' Light & Power Co. G. B. Rose, Pres.; W. A. Badger, Gen. Mgr.

HILLSBORO, TEX.—It is stated that the council has granted a franchise for a plant.

SHERMAN, TEX.—Wm. Tolson, Supt., writes us that this city has sold $44,000 of bonds, $24,000 of which will be for extending the plant and water-works.

WAXAHACHIE, TEX.—It is stated that the Waxahachie Electric Light Co. has decided to use aluminum line wire in making its extensions, and has ordered 500 lbs. of aluminum wire. It will need several thousand pounds more for extensions in the spring.

SILVERTON, COLO.—John Casey, Mayor, writes us that a proposition to put in a plant will be submitted to the voters at the election next month. Population, 3,000.

SPOKANE, WASH.—D. L. Huntington, Secy. and Gen. Mgr. Washington Water Power Co., writes us as follows regarding the proposed addition to the plant: The company has let contracts for almost the entire work with the exception of the building. The enlargement consists in two 750-K-W. direct current generators, running at a speed of 300 revolutions per minute, connected directly to the shaft of the turbines. One of these machines will be used for street railway power purposes, the other will be connected across the outside wires of the Edison three-wire system. The generators are being manufactured by the General Electric Co., and will be delivered in July. The water-wheels are two pairs of special McCormick turbines, manufactured by the S. Morgan Smith Co., York, Pa., and operated under a working head of 68 ft. It has not yet been decided what water power governor will be used, but the Lombard governor is receiving considerable attention. The new installation will be placed directly alongside of the present plant, and is designed in a manner to allow for enlargement along the same line of three or four times the capacity which is now being installed. The building will not be extended except as noted to cover the generating apparatus installed. This work will necessitate the lengthening of the dam and head gates, and the placing in position of a 10-ft. diameter steel flume, about 600 ft. long. It is hoped to have the plant in operation before the middle of next summer. It is proposed to install a 25-ton traveling crane. The switchboard appliances will be mounted on standard General Electric Co. panels, of Tennessee or Italian marble, and will consist of standard instruments, etc. In addition to this it is proposed to install total station watt meters and total station ammeters, as the added machines will give an output in excess of the capacity of the instruments now in position. The engineering work has been done by J. B. Fisken and Mr. Huntington.

PRINEVILLE, ORE.—H. V. Gates, Hillsboro, Ore., has been granted a 15-year franchise for a plant and water-works; estimated cost, $10,000. Work, it is stated, will begin in about 15 days.

LAKEPORT, CAL.—The Clear Lake Electric Power Co. has made application for a franchise permitting it to erect a line of poles and wire for the transmission of power along the county roads. Bids for the purchase of the franchise are asked by the county clerk until May 1.

NAPA, CAL.—Bids are asked until April 17 for the purchase of a 50-year franchise. H. H. Thompson, Cy. Clk.

SAN BERNARDINO, CAL.—It is stated that the Lytle Creek Light & Power Co., headed by Judge J. L. Campbell, proposes to develop 3,000-HP. in Lytle Creek Canyon this summer. The company has already expended over $8,000 in tunnels, surveys and preliminary work. The water will be taken from the main channel at Miller's Narrows to a point near the Parrish Place, where the drop will be sufficient to develop 1,500-HP. Judge Camp-

bell has relocated for power 1,000 ins. of water in the North Fork of Lytle Creek and a like amount in the Middle Fork of Lytle Creek. The construction of the three systems, it is claimed, will develop 3,000-HP. in Lytle Creek.——The supervisors have granted to H. C. Malone a franchise to lay and maintain a pipe line from Yucaipe to Crafton, on the northern border of Redlands. The line will be fourteen miles long, and a 14-in. vitrified pipe will be used.

UKIAH, CAL.—A committee has been appointed to investigate the question of a municipal plant to cost $18,000. R. L. Crane and J. H. Smith are on the committee.

SPRINGVILLE, UTAH.—Jas. E. Hall, Mayor, writes us that it is proposed to submit the question of issuing bonds for a plant to the voters in the fall.

OTTAWA, ONT.—John Aylen, Ch. Engr., 7 Carleton Chambers, Sparks St., writes us that the Metropolitan Electrical Co. of Ottawa (Ltd.), has let a contract for the construction of a power canal to develop 5,000 HP. at Britannia, Ont., about five miles above this city. Bids have not yet been called for the turbines and machinery, but will be before long.

CORNWALL, ONT.—It is stated that Mr. Snetzinger, M. P., of Cornwall, has asked the Minister of Railways and Canals that in the improvements now being made to the Farran's Point Canal, provision be made for a headway of water to be utilized for generating electricity.

RAT PORTAGE, ONT.—The question of the town purchasing the plant of the Citizens' Electric Co. is being considered. Councilman Belyea may be addressed.

NEW COMPANIES.—National Electrical Supply Co., Alexandria, Va.; $25,000; Henry D. Merrick, Pres.; Morell Mareau, Vice-Pres.; Edwin C. Graham, Secy.

Missouri Water, Light & Traction Co., Nevada, Mo.; $100,000; J. B. Quigley, S. A. Wight, H. M. Buck.

Yadkin Power Co., Salisbury, N. C.; Capt. J. A. Ramsey, State Engr., Salisbury, N. C.; J. Lee Maxwell, F. E. Boardman, Elec. Engr., Nashville, Tenn. The company will dam the Yadkin River near Salisbury and erect a power plant; electric lights will be furnished to Salisbury and Greensboro and power will be supplied various manufacturing towns and industries in Western North Carolina.

Garner Electric Light, Power & Telephone Co., Garner, Ia.; $10,000; E. C. Abbey.

Princeton Electric Works Co., 32 Nassau St., Princeton, N. J.; $100,000; Charles S. Robinson, Frederick Fisher.

Universal Light, Heat & Power Co., Auburn, N. Y.; $50,000; R. H. Huntington, Watertown, N. Y.; J. E. Ratchford, James Devlin, Syracuse, N. Y.

Wrightstown Water, Electric Light & Sewer Co., Wrightstown, N. J.; $5,000; Albert Watson, Lee C. Davis.

Interstate Electric Co., Columbus, O.; $20,000; Joseph Metzer, Fred Haffner, Matin Koch.

State Electric Co., Waterloo, Ind.; $1,500.

Citizens' Light & Power Co., Indianapolis, Ind.; to operate in the territory north of St. Clair St.; Albert Sahm, Chas. A. Bookwalter, Chas. E. Thornton.

Alton Electric Light & Power Co., Alton, N. H.

Lackawanna Valley Electric Light & Power Supply Co., Carbondale, Pa.; $200,000, with $20,000 paid in; J. B. Pursell, Treas., Wilkes-Barre, Pa.; T. L. Newell, Kingston, Pa.; Wm. D. Boyer, Scranton, Pa.

Eastern Water Power & Electric Power Co., New Egypt, N. J.; to construct a dam in the Delaware River, near Lambertville; $100,000; Bassler Boyer, Lebanon, Pa.; A. H. Boyer, Bridesburg, Pa.; Jacob H. Grove.

Paxons Island Water Power & Electric Power Co., New Egypt, N. J.; to construct a dam in the Delaware River; $100,000; Jacob H. Grove, New Egypt.

Gregory Central Station Co., Chicago; $10,000; furnish light, heat and power; C. E. Wetton, Oscar M. Wolff.

Citizens' Light Co., Belding, Mich.; to engage in establishing electrical and power plants producing electricity and electric lights and electric power, and to do business in Kent, Ionia and Montcalm counties; $25,000; Maurice A. Reed, John Greenop, Frank R. Chase.

Kalamazoo Valley Light & Power Co., Kalamazoo, Mich.; $500,000; William A. Foote, Jackson; Floyd U. Fuller, Steven S. Hulbert, Battle Creek.

Spring Lake Electric Light, Heat & Power Co., 301 Market St., Camden, N. J.; $50,000; James E. Hays, 301 Market St., Camden, N. J.; Geo. H. S. Young, 273 South 10th St., Philadelphia; John M. Fultz, Fraser, Pa.

Consumers' Electric Co., Yonkers, N. Y.; $10,000; Leonard B. Lampman, Coxsackie; F. A. Stratton, George M. Curtis, Jr., New York.

Hawthorne Heat, Light & Power Co., North Paterson, N. J.; $10,000; Irvy Myers, Adam Vreeland, Wm. H. Post, North Paterson.

BRIDGES

BOSTON, MASS.—Bids are asked until 12 m., March 27, for constructing a retractile draw for the Malden bridge over the Mystic River. Wm. Jackson, Cy. Engr.

CHARLESTOWN, MASS.—A bill appropriating $200,000 for the reconstruction of the Malden bridge over the Mystic River was reported to the legislature March 13 by the committee on metropolitan affairs.

FITCHBURG, MASS.—Fred. W. Bateman, of Parker & Bateman, Engrs., Clinton, Mass., is preparing plans for an overhead trestle 400 ft. long, to be constructed by the Fitchburg & Suburban St. Ry. Co. on Putnam St. Harry L. Pierce, Pres.

MALDEN, MASS.—The Boston & Maine R. R. Co. has made an agreement with the council to construct a new iron bridge over the tracks at Washington St., to cost about $30,000.

NEWPORT, R. I.—Wm. H. Lawton, Engr., informs us that a contract has been awarded to J. K. Sullivan, at $10,970, for approaches and abutments, and, at $4,470, for filling the approaches, of the Van Zandt Ave. bridge.

HARTFORD, CONN.—Bids are asked by the board of commissioners of the Connecticut River bridge and highway district, 64 Ætna Life Insurance Bldg., until April 15, for furnishing the material and for constructing a bridge over a portion of the East Hartford meadows, as stated in our advertising columns. Edwin D. Graves, Engr.

NEW HAVEN, CONN.—The Berlin Iron Bridge Co., East Berlin, has been awarded a contract by the street board for an iron bridge.

SCHENECTADY, N. Y.—It is reported that the N. Y. C. & H. R. R. R. Co. intends to build a bridge over the Mohawk River at Hoffmans Ferry to connect its line with the West Shore R. R., and also to place a yard there.

STILES STATION, N. Y.—It is reported that the Syracuse, Lakeside & Baldwinsville R. R. Co. has awarded a contract to the Berlin Iron Bridge Co., at $6,500, for a bridge over the D., L. & W. R. R.

SYRACUSE, N. Y.—W. H. H. Gere, Div. Engr. of the Erie Canal Co., has received plans for a hoist bridge to be constructed over the canal at Catharine and Almond Sts.

TROY, N. Y.—The highway commissioners have recommended the awarding of a contract to the Massillon Bridge Co., at $2,750, for an iron bridge of 80 ft. span and two 20-ft. girder spans, in Geer Hollow.

WATERFORD, N. Y.—A bill has passed the legislature appropriating $3,000 for a foot bridge over the canal.

WATERPORT, N. Y.—F. M. Harris writes us that bids are asked at once by John Rockham, Waterport, for constructing an arch, 560-ft. span and 18 ft. wide; estimated cost, $14,000.

HOBOKEN, N. J.—Assemblyman Abbett has introduced a bill in the legislature to authorize the construction of a viaduct from Eighth St., Hoboken, to Jersey City Heights, at a cost of about $50,000.

KEARNEY, N. J.—The Erie R. R. Co. has agreed to construct a steel and iron bridge, 60 ft. wide, over its tracks at Lower Kearney Ave., at a cost of $12,000.

CARLISLE, PA.—A contract has been awarded to the Pittsburg Bridge Co., at $4,190, for an iron bridge, 130 ft. long, over the creek at Craighead Station.

NEW KENSINGTON, PA.—A contract was awarded March 13 to the Schultz Bridge & Iron Co., McKees Rocks, at $89,000, for a bridge over the Allegheny River from Ninth St. to Boquet Station, on the West Penn R. R.

PHILADELPHIA, PA.—The Southwestern Traction Co. will strengthen the Penrose Ferry bridge with trusses, at a cost of $60,000.

TOWANDA, PA.—Hiram E. Bull, County Surveyor, informs us that three county bridges are in contemplation this season, the construction of which has not yet been approved by the court and commissioners.

RALEIGH, N. C.—Bids are asked by the county supervisors until April 23 for a steel bridge over the river at the Falls of Neuse, according to reports.

MACON, GA.—Bridger Smith, Cy. Clk., informs us that the following bids were received March 14 for constructing a steel truss bridge of two spans 185 and 196 feet: Virginia Bridge Co., $51,900; Indiana Bridge Co., $53,000; Toledo Bridge Co., buckle plate flooring, $46,224; wood flooring, $35,434; Groton Bridge & Mfg. Co., No. 1, creosoted timber base, $50,000; plan No. 1, metal and concrete base, $53,000; plan No. 2, metal and concrete base, $54,500; Grant Wilkins, $42,108; Lasley Bros., brick flooring, $44,000; wood flooring, $32,000; Penn Bridge Co., $58,000; Youngstown Bridge Co., $54,875; Champion Bridge Co., $60,000; Pittsburg Bridge Co., $56,800; Brackett Bridge Co., plan A, $34,970; plan B 1, $41,897; plan B 2, $28,326; plan B 3, $25,170; Geo. E. King Bridge Co., $52,384.

JACKSONVILLE, FLA.—The Atlantic, Valdosta & Western Ry. Co. has been authorized to construct a viaduct over Duval St.

MOUNTAINBORO, ALA.—The Nashville, Chattanooga & St. Louis Ry. Co. has had two bridges washed away, according to reports. H. McDonald, Ch. Engr., Nashville, Tenn.

HARRISON, O.—The commissioners of Hamilton county, Cincinnati, O., and Dearborn county, Lawrenceburg, Ind., have completed arrangements for the repair of the Whitewater River bridge. The engineers of both counties are to prepare plans and estimates of the cost of a new abutment.

IRONTON, O.—John F. Hager and A. C. Campbell, of Ashland; E. W. Bixby, of Ironton, and others, propose to incorporate the Ironton & Kentucky Bridge Co., with a capital stock of $1,000, to combine with the Ashland & Ohio Bridge Co. to construct a bridge over the Ohio River.

SIDNEY, O.—Bids are asked until April 4 for furnishing the material, plans, etc., and for constructing the superstructure of a pin connected Pratt truss bridge, 125 ft., of 2,400 lbs. capacity per lin. ft. J. S. Laughlin, County Audr.

CLINTON, IND.—The county commissioners are preparing to construct a new steel bridge over the Wabash River, at this place.

RICHMOND, IND.—Petitions have been presented to the county commissioners for the construction of a bridge over Frazers' Branch, two bridges over streams in Franklin township, two over Symons Creek in Jackson township, one over Morgans' Creek in Greene township and one over the Greensfork on the Wayne and Randolph county line.

TERRE HAUTE, IND.—F. T. Hatch, Ch. Engr., Terre Haute & Indiana R. R. Co., Terre Haute, writes us that bids will soon be asked, probably next week, for constructing two medium steel deck plate girder bridges on stone foundation. One, consisting of three spans, 75 ft. each, width 6 ft. 6 ins., c. to c., at Walnut Fork, near Crawfordsville, and the other, of four spans, 60 ft. each, width 6 ft. 6 ins., c. to c., over Sugar Creek, near Darlington, Ind.

CHICAGO, ILL.—Bids are asked by the board of sanitary trustees, 1110 Security Bldg., until May 10, for furnishing the material and for constructing the sub and superstructure of a four-track swing bridge having a span of 334 ft. 6 ins. J. F. Haas, Clk.

JOLIET, ILL.—The board of sanitary district trustees has received the following bids for the Cass St. and Jefferson St. bridges, respectively, over the canal: J. G. Wagner & Co., $29,476 and $23,160; Chicago Bridge & Iron Co., $30,732 and $24,834; Toledo Bridge Co., $31,200 and $25,000.

URBANA, ILL.—Bids are asked at the court house until 10 a. m., March 30, for constructing three highway bridges on masonry. Ira O. Baker, Engr., 702 West University Ave., Champaign, Ill.

BUTTERFIELD, MINN.—J. H. Keith & Co., 919 New York Life Bldg., Minnesota, have been awarded a contract by Winston Bros., Minneapolis, for the construction of bridges on the Chicago & Northwestern Ry. from Burt, Ia., via Wekome, Butterfield, Springfield, Sanborn, Minn., to Redwood Falls.

DAKOTAH, IA.—Bids are asked until April 5 for constructing both wooden and steel bridges for the year 1899. Harwood Sharp, County Audr.

DES MOINES, IA.—Edward Thatcher, of Keeper & Thatcher, Des Moines, is preparing plans for a Melan arch bridge for North Sixth St., at no expense to the city.

GRAND FORKS, N. DAK.—Bids are asked until April 3 for furnishing all bridge iron and for constructing wooden bridges during 1899. J. W. Scott, County Audr.

KEARNEY, NEB.—Reports state that seven spans of the bridge over the Platte River at this place were carried away by high water March 16.

OMAHA, NEB.—The Omaha & Council Bluffs Ry. & Bridge Co. is planning to replace its wooden trestle bridge over Indian Creek with a steel structure, according to reports.

TOPEKA, KAN.—The Topeka Commercial Club has recommended that a proposition to construct a Melan arch bridge be submitted to a vote.

ANACONDA, MONT.—The county commissioners have awarded a contract to J. M. Luke, Des Moines, Ia., for a riveted Pratt truss bridge of three spans, 95 ft. each and 16 ft. wide, on cylinder piers.

DENVER, COLO.—The board of public works has recommended the bid of M. J. Patterson, at $2,644, for the stone abutments of the Stout St. bridge.

ELLENSBURG, WASH.—Bids are asked until April 3 for widening and strengthening the south approach of the Durr bridge. Simon P. Fogarty, County Audr.

GOLD BEACH, ORE.—Bids are asked until April 5 for reconstructing a bridge over Elk River. C. V. Woodruff, County Clk.

HAYWARDS, CAL.—Bids are asked until 11 a. m., March 27, for constructing a concrete culvert. Frank C. Jordan, Clk. Bd. of Supervisors, Oakland.

KESWICK, CAL.—A petition will be presented to the board of supervisors, at Reading, for the construction of a bridge over the Sacramento River at Spring Creek.

SUISUN, CAL.—The board of supervisors has awarded a contract to the San Francisco Bridge Co., at $1,033, for a bridge over Pleasants Valley Creek.

ALBUQUERQUE, N. MEX.—It is reported that an iron bridge will be constructed about 30 miles from this place. Edward A. Pearson, County Surveyor.——The legislature has passed a law authorizing the counties to levy special taxes to the amount of $15,000 for the construction of bridges, according to reports.

KINGSTON, ONT.—Reports state that the residents of Howe Island have offered to contribute $10,000 toward the construction of a bridge over the channel, 1,300 ft. across; estimated cost, $30,000.

VICTORIA, B. C.—Edward Mallandaine has submitted plans to the council for a permanent roadway and bridge to replace the present structure at James Bay, according to reports.

BUILDINGS

AMESBURY, MASS.—A fire in this city, March 18, destroyed the opera house block, St. James' Church, and other buildings; reported loss, $250,000.

BOSTON, MASS.—Preliminary plans have been prepared for a new music hall, 150 x 210 ft., to be erected at Huntington and Massachusetts Aves., to have a seating capacity of 2,630 people. McKim, Mead & White, Archs., 160 5th Ave., New York.——An 8-story hotel building for women, to be known as "Homestead Court," will soon be built at Warren Ave. and Clarendon St., to cost about $400,000. Josephine Wright Chapman, Arch.

SALEM, MASS.—This city has appropriated $35,000 for the erection of a new police station on Derby St.

NEW HAVEN, CONN.—Wm. G. Lotze, Secy. of Y. M. C. A., 713 Chapel St., informs us that the association hopes to be ready for the erection of a new building on Temple St. in about one year. We are in receipt of a circular of general instructions to competing architects, which may be seen at the office of Engineering News. The proposed building is to cost about $150,000, including heating and ventilating apparatus, plumbing and wiring, but exclusive of elevators and furniture. A prize of $1,000 is offered for the best design, and three prizes of $250 each for the next best. Plans must be delivered between April 27 and April 29. Prof. A. D. F. Hamlin, Columbia University, New York, is consulting architect.

PROVIDENCE, R. I.—Orrin E. Jones has been granted a permit to erect a 7-story brick storage warehouse on Central St. Angell & Swift, Archs.

ALBANY, N. Y.—Plans and specifications have been completed for a new church building to be erected at Lake and Western Aves. for the United Presbyterian Church, to have a seating capacity of 450.

BROOKLYN, N. Y.—Bids are asked by the board of education, at 585 Broadway, New York, until March 30, for alterations in and erecting additions to Public Schools 63 and 75; also until April 5 for erecting an addition to Public School 84, Borough of Brooklyn.

COHOES, N. Y.—Bids are asked by the board of education until April 5 for erecting a 2-story brick addition to school No. 11, Park Ave. R. A. Ross, Clk.; Wm. M. Goddard, Arch., Masonic Temple, Cohoes.

COLLINS, N. Y.—It has been decided to erect an additional building for the Collins Farm Homeopathic Hospital at this place, to cost about $60,000. Dr. Edwin H. Walcott, Pres.; A. C. Esenwein, Arch., 707 Mooney Bldg.

NEW YORK, N. Y.—The Windsor Hotel, a 7-story brick building at 46th and 47th Sts. and 5th Ave., was destroyed by fire March 17.——The 6-story building at 354 Broadway, occupied by James Elliott & Co., linen manufacturers, and others, was damaged by fire March 17; reported loss, $100,000.——Plans have been filed by Abelman & Rosenbaum, 1804 Madison Ave., for four 5-story brick flat and store buildings at Columbus Ave. and 108th St., to cost $80,000. M. Bernstein, Arch.; by Mrs. J. M. Livingston, Morristown, N. J., for a 5-story brick dwelling at 992 5th Ave., to cost $80,000. Geo. A. Freeman, Arch., 27 East 20th St.; by Gundlach & Koch, 204 East 86th St., for four 5-story brick flat buildings at 91st St. and 1st Ave., to cost $100,000. Henry Anderson, Arch.; by E. Wm. Wagner, 11 Broadway, for a 6-story brick flat building at Amsterdam Ave. and 86th St., to cost $200,000. Flemer & Koehler, Archs., 1 Broadway; by F. Reinhardt, 713 Broadway, for a 7-story brick flat and store building at Broadway and 95th St., to cost $200,000. Henry Anderson, Arch., 1180 Broadway; by H. Andrews, Boston, Mass., for an 18-story brick office building at Broadway and Chambers St., to cost $700,000. Cass Gilbert, Arch., St. Paul, Minn.; by Seglin Bros., 83 Ave. B, for five 6-story brick flat buildings on 112th St., near 5th Ave., to cost, $162,500. Schneider & Herter, Archs., Bible House; by J. C. Murray, 41 Cedar St., for a 7-story brick flat building on Central Park West, near 100th St., to cost $100,000. L. F. J. Weiher, Jr., Arch.; by Isaac L. Smith, 40 West 128th St., for a 7-story brick flat and store building at 129th St. and Lenox Ave., to cost $185,000. Richard R. Davis, Arch., 247 West 125th St.; by the New York Yacht Club, for a 7-story brick club house at 37 to 41 West 44th St., to cost $200,000. Warren & Wetmore, Archs., 3 East 33d St.——Bids were recived by the board of education March 16, as follows: (a) for erecting Public School 175 at Jerome and Walton Aves., between 184th St. and Fordham Landing Road; (b) for erecting Public School 171 on 103d and 104th Sts., between 5th and Madison Aves.: Harry McNally, 287 4th Ave., (a), $223,500; Luke A. Burke, 401 West 59th St., (a), $224,750; Mahoney Bros., 52 New Bowery, (a), $276,592; (b), $328,900; P. J. Walsh, 503 5th Ave., (a), $262,000, (b), $312,000; H. Probst, 1180 Broadway, (a), $239,450; P. Gallagher, 150 5th Ave., (a), $254,246, (b), $303,743; Mapes-Reeve Construction Co., 150 Nassau St., (a), $244,678, (b), $310,000; Murphy Bros., 407 East 101st St., (a), $252,000, (b), $315,974; Thomas Cockerill & Son, 550 West 51st St., (a), $254,000, (b), $311,787; Wm. S. Long, 1125 Broadway, (b), $311,800; Jas. J. Loonie, 287 4th Ave., (b), $299,975.

PORTCHESTER, N. Y.—The board of education is considering the advisability of erecting a new school building at Irving and Hasco Aves., to cost $32,000. John W. Diehl, Pres.

SYRACUSE, N. Y.—Bids are asked by the state armory commissioners, Albany, until March 24 for constructing a rifle range, repairing roof, plumbing, etc., at the State armory building in this city.——Gee & Murphy are reported to have been awarded the contract for the erection of a new building on James St., for Pierce, Butler & Pierce, to cost $25,000.

IRVINGTON, N. J.—Bids are asked until April 4 for erecting a 4-room brick school building. E. D. Harrison, Clk. Bd. of Education; William Moll, Arch., Park Ave., Irvington.

NEWARK, N. J.—Plans are being prepared for the alteration of the dwelling house of Campbell N. Clark, 1010 Broad St., to cost about $30,000. Howard, Cauldwell & Morgan, Archs., 10 East 23d St., New York.

CLIFTON HEIGHTS, PA.—Bids are asked until April 3, acording to reports, for a hot water heating apparatus for the borough school building. J. H. Wise, Secy.

LANCASTER, PA.—The following bids have been received by the school board for erecting an 8-room school building on North Mary St.: Henry Burger, $24,989; G. Samuel Flick, $23,943; George H. Oster, $24,799; Jacob Stumpf, $26,992; Herman Wohlsen, $23,945; Hergenrother & Ewing, $27,865; H. N. Breneman & Son, $24,499; Frank McLaughlin, $25,295.

PHILADELPHIA, PA.—Plans have been prepared for a 1½-story brick, stone and iron bathhouse to be built for the city in the 21st Ward. Frank G. Caldwell, Arch., 1110 Walnut St.——Allen B. Rorke, Philadelphia Bourse, has received the contract for erecting the buildings for the exposition to be held in this city between Sept. 14 and Nov. 30, 1899, at $298,000, work to be completed by Aug. 15. G. W. & W. D. Hewitt, Bullit Bldg., have been appointed as architects of the permanent buildings to be erected for the Philadelphia Museum, and Wilson Bros. & Co., Drexl Bldg., architects of the exposition buildings.

JACKSON, N. C.—Bids are being asked for the building and equipment of a fireproof record building for Northampton county. Plans may be obtained from the architect, Room 56, Metzerott Bldg., Washington, D. C.

WILMINGTON, N. C.—Zachary & Zachary, Raleigh, N. C., have been awarded the contract for erecting the new 3-story store building in this city for S. & B. Solomon.——It is reported that Morris Bear & Bros. have received the contract for erecting a large brick office building, 42 × 58 ft., for the Messenger Publishing Co.

CLEVELAND, O.—G. H. Matchett has been granted a permit to erect a 5-story brick apartment building on Willson Ave., near Quincy St., to cost about $60,000.——A 3-story brick store and apartment building will be erected at Wade Park and Dunham Aves. for Arthur M. Haber, to cost $50,000. F. C. Bate, Arch.——M. A. Bradley is reported to be about to erect three new buildings in this city.——The contract will soon be let for erecting a new 6-story office building on Euclid Ave. for King & Moore, to cost about $75,000. W. B. Waterson, Arch.

CHICAGO, ILL.—A 3-story store and apartment building will be erected by Conrad Bristle at Evanston and Bryn Mawr Aves., according to reports, to cost about $35,000.

JACKSONVILLE, ILL.—It is announced that the F. W. Menke Stone & Lime Co., Quincy, Ill., has been awarded the contract for erecting the new high school building in this city, to cost $55,000.

MILWAUKEE, WIS.—A new 12-story office building will be erected for Henry Herman at Broadway and Wisconsin St., to cost about $150,000. W. A. Holbrook, Arch., Camp Bldg.

ELLSWORTH, MINN.—Bids are asked until April 4 for erecting a public school building for district No. 40, Nobles county, in Ellsworth. F. W. Stanton, Clk. of School Bd.; H. C. Gerlach, Arch., Mankato, Minn.

ST. PAUL, MINN.—Bids are asked by the supervising architect, Washington, D. C., until April 13, for the low pressure and exhaust steam heating, mechanical ventilating apparatus, etc., for the U. S. building in this city.

COUNCIL BLUFFS, IA.—The people of this city have voted to issue bonds for the erection of a new high school building, to cost $65,000.

WAYNE, NEB.—Reports state that plans have been accepted for a new court house for Wayne county, to cost $26,000.

CANTON, S. DAK.—W. E. Bush, Des Moines, Ia., has received the contract for erecting a new court house for Lincoln county, at $16,436.

YANKTON, S. DAK.—Plans have been prepared by W. L. Dow, Sioux Falls, S. Dak., for a new dining hall for the state insane asylum, to be erected by day labor at a cost of about $50,000.

FARGO, N. DAK.—The trustees of the Scottish Rite of this State have decided to erect a new $30,000 Masonic temple building.

ANACONDA, MONT.—Bids are asked by the commissioners of Deerlodge county until April 11 for constructing the jail cells in the new jail building, estimated to cost $5,000. H. M. Patterson, Arch.

JOPLIN, MO.—P. J. Bratley, of Joplin, has been awarded the contract for erecting the Schifferdecker-Spencer block, at $13,200.

FORT WORTH, TEX.—R. W. Thompson, St. Louis, Mo., is reported to have received the contract for erecting a new station for the Texas & Pacific R. R. Co., exclusive of the train shed, heating, etc.; estimated cost, $77,000. B. S. Wathen, Ch. Engr., Dallas, Tex.

GREENVILLE, TEX.—King's Opera House, the City Library and other buildings were burned March 17; reported loss, $125,000.

SHERMAN, TEX.—William Tolson informs us that this city has sold $44,000 of bonds, of which $20,000 will be used in erecting a new school building.

GRAND JUNCTION, COLO.—Bids are asked by the office of Indian affairs, Washington, D. C., until April 13, for constructing a steam heating plant at the Indian Industrial School in this city. W. A. Jones, Comr.

ALTURAS, CAL.—Bids are asked until April 3 for erecting a brick or stone jail for Modoc county, at Alturas. L. S. Smith, Clk.

AUBURN, CAL.—Plans and specifications are asked by the supervisors of Placer county until April 5, for a new county hospital to be built at Auburn; also for six burglar proof steel jail cells, with corridor and partition screen, to cost about $4,000. J. B. Landis, County Clk.

SAN FRANCISCO, CAL.—A 4-story brick business building is to be erected at First and Jessie Sts., to cost about $50,000. Sylvain Schnaittacher, Arch.——The following bids fere received by the navy department, Washington, D. C., March 15, for the construction of a barracks and boiler house at the U. S. naval training station at Yerva Buena Island, Cal.: California Bridge & Construction Co., Oakland, Cal., $89,470; Moore & Cameron, San Francisco, $89,289; for ending sewer in channel deduct, $4,000. Phil Sheridan, Berkeley, Cal., $90,463. M. C. Lynch, San Francisco, $88,368; ending sewer in channel, $85,580; time, 5 months. J. W. Smith, San Francisco, $91,455; ending sewer in channel, $88,325; time 6 months. W. W. Anderson, San Francisco, $96,795. Frank H. Mason, San Francisco, $83,999; $4 ft. additional for every foot of sewer over 80 ft. John H. McCoy, San Francisco, $96,400. Campbell & Pettus, San Francisco, $74,400. Charles Alsup, San Francisco, $83,098. Peacock & Halliday, San Francisco, $89,466. J. W. Hansbrough, San Francisco, $83,347. J. B. McKenzie & N. M. Fletcher, San Francisco, $79,500. Wm. M. Constable, San Francisco, $84,590. Edwin L. Brooks, San Francisco, $89,989. Sinnot & McCann, San Francisco, $79,990. Matthew McGowan, San Francisco, $81,981. F. A. Williams, San Francisco, $84,695. Victor Hoffman & Wm. F. Ambrose, San Francisco, $98,299. Mathew McCarthy, Stockton, Cal., $86,000. Williams Bros., Oakland, Cal., $90,882.——J. W. Hansbrough, San Francisco, is reported to have been awarded the contract for the erection of 12 officers' quarters at the Mare Island Navy Yard, at $97,797.

HONOLULU, HAWAII.—Bids are asked until March 30 for erecting a school building at Kulaokahua, Beretania St., Honolulu. Henry E. Cooper, Minister of Pub. Instruction.

OSHAWA, ONT.—Bids are asked until March 25 for erecting a building for the Presbyterian Church at Oshawa. Address W. J. Hare, Oshawa.

LIEGE, BELGIUM.—Work will begin early next year, according to reports, on the construction of the buildings for the Liege International Exposition to be held in May, 1903, under the patronage of the government of Belgium.

WATER-WORKS.

AUBURN, ME.—Local papers state that the water commissioners will soon begin to lay pipe and to build a portion of the Merrill Hill reservoir, the latter to be done by contract.

BLUEHILL, ME.—It is proposed to get a water supply from the springs on the mountains. A reservoir of 200,000 gallons capacity will be built.

LISBON, ME.—The incorporators of the Lisbon & Topsham Water Co. are Edward Plummer, H. A. Christopher, W. H. Newell, Frank C. Whitehouse, J. A. Fisher, Geo. E. Stinson, Chas. S. Whitney and others; capital stock, $200,000. The company will furnish water to all the villages in the towns of Topsham and Lisbon.

CLAREMONT, N. H.—The question of the town owning the works is being considered. F. F. Haskell, Clk.

EPPING, N. H.—A. M. Mitchell writes us that nothing has yet been done towards building works for the Epping Water Co., newly incorporated.

PLYMOUTH, N. H.—The town has decided to offer the Plymouth Aqueduct & Water Co. $35,000 for its works. B. F. St. Clair and Geo. H. Colby may be addressed.

BELMONT, MASS.—The town has appropriated $4,000 for purchase of water meters and $3,000 for new mains.

BOSTON, MASS.—Bids are asked until April 4 for excavating soil from Section 4 of the Wachusett Reservoir, and excavating and refilling at the easterly portion of the North Dike at Clinton. The work to be done includes the clearing and grubbing of 245 acres, and the excavation of 315,000 cu. yds. of material, and also for laying water pipe, as stated in our advertising columns. Wm. M. Davenport, Secy., Metropolitan Water Board, 3 Mt. Vernon St.

HANOVER, MASS.—The question of putting in works for fire protection is being considered. E. C. Waterman and J. F. Simmons may be addressed.

MEDWAY, MASS.—The bill authorizing the town of Medway to put in works has been favorably acted upon by the legislative water committee. It provides for the issuance of $75,000 of 6% 30-year bonds.

SALEM, MASS.—The council has appropriated $25,000 for replacing a portion of the cement-lined water pipe with cast-iron pipe.

PASCOAG, R. I.—It is stated that a company has been organized to build works.

KENSINGTON, CONN.—The N. Y., N. H. & H. R. R. Co. has offered Wooding Bros. $15,000 for their pond, from which it is proposed to furnish water by gravity to the railway engines, etc., according to reports.

RIDGEFIELD, CONN.—The Ridgefield Water Supply Co. has let the contract for building the works to the Sanitary Construction Co. Work will begin April 1. Frederick Siebert, Waterbury, Conn., is interested.

WILLIMANTIC, CONN.—Oscar O. Tanner, Mayor, writes us that the city proposes to put in a new set of water power pumps at the pumping station and would like to hear from mechanical engineers about preparing specifications. W. D. Grant, Chn. Water Com.

HEMPSTEAD, N. Y.—M. A. Driscoll, Supt. Hempstead Water Co., writes us that it has been decided to lay about 1½ miles of mains, requiring six 6-in. and 12 4-in. gates. The pipe and most of the material is on hand.

HUME, N. Y.—C. E. Ingham writes us that nothing has yet been done towards securing works.

NEWBURG, N. Y.—This city voted March 14 by a majority of 506 against securing a new supply at a cost of $274,000.

OLEAN, N. Y.—A contract has been awarded to the Snow Steam Pump Works, Buffalo, and 126 Liberty St., New York, by the water commissioners for a vertical acting Corliss pumping engine to be controlled by a governor.

CAMDEN, N. J.—Bids are asked until March 28 for furnishing a new heater at the new works. It is to condense exhaust from compressor and independent air pumps and increase heat in water from the Holly engines which have surface condensers and boiler feed pumps on main engines. L. E. Farnham, Cy. Engr.

NEW BRUNSWICK, N. J.—The board has decided to increase the capacity of the present pumping station by the purchase of a new pumping engine, and $25,000 has been set aside for this purpose.

PENNSGROVE, N. J.—It is stated that a local company may be organized to build works, the town being opposed to municipal works.

EASTON, PA.—Press reports state that a deal has been consummated, whereby Boston men secure a control of the Easton Water Co. The works will be enlarged and improved, and the system extended over Greater Easton. The purchasers are believed to be the same who recently built the Easton, Palmer & Bethlehem Electric Railway, and are also interested in the new electric light and gas companies organized in this city.

LINDSEY, PA.—Press reports state as follows: Dr. J. L. Wentz, and five others, of Scranton, Pa., of the Lindsey Water Co., have consolidated their interests with the Punxsutawney Water Co., and a corporation to be known as the Clover Run Water Co., capitalized at $150,000, has been organized. The new concern will build gravity works and a 10,000,000-gallon reservoir will be built on Clover Run, 11 miles from town, and the water will be conducted through an 18-in. main to Big Run, Punxsutawney, Lindsey and Walston, supplying 15,000 people.

MEADVILLE, PA.—W. A. Doane, Cy. Engr., writes us that bids are about to be asked for furnishing 19 tons of 6-in. cast-iron water pipe, 13 tons of 4-in. pipe, 9 hydrants, five 6-in. valves, 14 4-in. valves, etc. G. S. Cullen, Supt.

POTTSVILLE, PA.—The county commissioners are preparing plans for improving the works at the county house. A new reservoir with a capacity of 8,000,000 gallons is to be built at the almshouse to replace the present one, which has a capacity of 250,000 gallons. Maj. H. S. Thompson may be addressed.

READING, PA.—Bids are asked until March 28 for furnishing cast-iron water pipe, specials, gate boxes, hydrants, laying mains for the year. F. P. Heller, Pres. Water Comrs.

SEAFORD, DEL.—L. E. Wallace writes us that on account of the lack of the required legislation no action towards works will likely be taken this year.

BALTIMORE, MD.—The following contracts have been let: Auxiliary piping for Mount Royal Pumping Station of the water department, Crook, Horner & Co., $13,533; check valves, Frank W. Dilks; 24-in., $155; 36-in., $89; electric plant for Mount Royal Pumping Station, Morton, Reed & Co., $5,490.

COLQUITT, GA.—An Atlanta company has been awarded the contract for works for this place.

ROME, GA.—H. M. Smith, Cy. Engr., writes us that the question of building either a water filter or settling basins at the works is still being considered.

SAVANNAH, GA.—The aldermen are considering an ordinance authorizing the placing of meters in houses connected with the mains. Alderman Bacon, Chn. Com.

ABBEVILLE, ALA.—H. W. Owens, Cy. Clk., writes us that no move towards securing works has yet been taken.

MONTGOMERY, ALA.—Bids are asked until April 15 for constructing a 5,000,000-gallon pumping engine, as stated in our advertising columns. Geo. A. Ellis, Consult. Engr., 114 Monroe St.; R. H. Sommerville, Treas.

BASTROP, LA.—J. B. Lenz, Chn. Water Com., writes us that an election is about to be ordered to vote on the question of issuing bonds for works. There will be wanted a tower and tank of 50,000 gallons, 1,800 ft. of pipe, etc.

SHELBYVILLE, TENN.—A. A. McCorkle, Supt. National Water-Works & Construction Co., writes us that a standpipe and 1,200 ft. of 6-in. pipe will be built at once. R. J. Cunningham, Treas., Hamilton Bldg., Pittsburg, Pa.

NEWPORT, KY.—Bid are asked until April 5 for furnishing a 300-HP. water tube boiler for the water-works. Geo. Hornung, Supt.

BEREA, O.—Bids are asked until April 4 for furnishing materials and for constructing a stand-pipe 16 × 100 ft. and for laying 570 tons of cast-iron water pipe. L. E. Chapin, Canton; T. J. Quayle, Mayor.

CINCINNATI, O.—Bids are asked until April 12 for furnishing for the year ending April 30, 1900, machine shop castings in loam and green sand, furnaces, grates, and linings, street valves and boxes, iron pipe and pipe specials, brass castings, brass ferrules, etc. G. H. Spellmire, Clk. Bd.——Bids are asked until April 28 by the commissioners for constructing three reservoirs at California and for laying pipe to the top of the hill from the river; estimated cost, $1,000,000. G. Bouscaren, Ch. Engr.; August Herrmann, Pres.

SCIO, O.—Bids were asked until March 20 by W. F. Stewart & Co., contractors, for subletting the construction of the brick pumping station, for setting two pumps, boilers, drilling three wells, etc., for the new works.

YOUNGSTOWN, O.—City Engineer Lillie is making surveys for making a reservoir of Lake Cohasset.

ANDERSON, IND.—It is proposed to extend the mains in Shadeland. S. A. Towell, Supt.

BLOOMFIELD, IND.—Surveys, it is stated, are being made for works and a light plant.

NORTH BEND, IND.—J. H. Johnson, Mayor, writes us that an election will be held April 14 to vote on the question of issuing bonds for works and an electric plant. Bids will probably be asked in April if the bonds are voted. Population, 1,300.

PENDLETON, IND.—It is stated that the council has granted a franchise to the Pendleton Water-Works & Electric Light Co. to put in works and an electric light plant, to cost $34,500. Under the terms of the franchise the city pays a fixed amount to the company for lights and fire hydrants, and after a term of years the plant belongs to the city.

VINCENNES, IND.—The Continental Filter Co. 41 Wall St., New York, has closed a contract with the Vincennes Water Supply Co. for a filter plant. The plant will consist of 10 filtering and settling tanks, each filter being of 500,000 gallons capacity per 24 hours, and will embody the Continental Filter Co.'s complete system of sedimentation and coagulation, and will be constructed and operated in conformity with the conclusions reached in the experiments at Louisville and Cincinnati.

SAGINAW, MICH.—We are informed that there has been no move as yet in regard to filtering the water. J. J. Weale, Supt.

SPARTA, MICH.—This place voted March 14 against the city's purchase of the works owned by L. W. Welch. Wallace Burtch, Pres. Village.

CHICAGO, ILL.—The committee has recommended that an appropriation of $50,000 be made for high-pressure water mains for the use of the fire department.

CHICAGO, ILL.—Bids are asked until March 29 for laying water pipe in several streets. L. E. McGann, Pres. Bd. Local Improvements.

KENOSHA, WIS.—The Sanitary Construction Co., Green Bay, Wis., has submitted the lowest bid for constructing works at the Menominee Indian schools, at about $10,000.

OREGON, WIS.—C. H. Netherwood, Chn. Village Bd., writes us that this place has voted to issue $7,000 in bonds for works, the supply to be secured from artesian wells. The board will buy about two miles of second hand pipes, hydrants, etc. Bids are wanted for a steel tower, wooden tank, gasoline engine, pumps, etc. John Nader, Engr., Madison, Wis.

SUN PRAIRIE, WIS.—R. W. Davis, Pres., writes us that nothing in regard to works will be known definitely until after the election.

WHITEWATER, WIS.—Artingstall & Keeler, Rialto Bldg., Chicago, have appraised the works of the Whitewater Water-Works Co., with a view to the city's buying the works.

DUBUQUE, IA.—W. W. Bonson, Secy. Dubuque Water Co., writes us that the contracts have been let and that work will soon be begun for the following improvements to the works: Holly Mfg. Co., Lockport, N. Y., two Holly-Gaskill 5,000,000-gallon pumps; O. H. Jewell Filter Co., 40 West Quincy St., Chicago, 2,500,000-gallon gravity filter plant; E. P. Allis Co., Milwaukee, electrical pumping engine, etc.: two 1,000,000-gallon reservoirs,

2,000 tons of 8 to 24-in. pipe, with necessary specials, etc., pumping station, dynamos, etc. The new supply will be from artesian wells and the Mississippi River. J. A. Cole, Engr., 1585 Old Colony Bldg., Chicago.

GARWIN, IA.—C. Christensen, Mayor, writes us that the town will probably put in works in about three months. Population, 700.

KEOTA, IA.—Bids are asked until April 2 for furnishing a pump of 200 or 250 gallons of water a minute capacity, boilers, etc., for the Star Oat Meal Co. Wm. J. Pugh, Muscatine, Ia., may be addressed.

ROCKWELL, IA.—We are informed that an election will be held March 27 to vote on the question of building works. Bids will probably be asked in May. A tank on a steel tower 80 ft. high will be wanted. Population, 1,000. Jackson & Moss, Engrs., Des Moines, Ia.; C. W. Harris, Mayor.

RUTHVEN, IA.—Alex. Ruthven, Mayor, writes us that an election will be held March 27 to vote on the question of issuing $4,500 in bonds for works.

AUSTIN, MINN.—Bids are asked until April 7 for furnishing 20-in. water pipe, bends, etc., as stated in our advertising columns. W. M. Todd, Supt.

BLOOMING PRAIRIE, MINN.—An election will be held April 4 to vote on the question of issuing $3,000 in 5% bonds for works.

FRAZEE, MINN.—This place is reported to have voted bonds for works.

MORTON, MINN.—G. W. Welch, Pres., writes us that the preliminary vote at the last election was in favor of works. Population, 700.

MOUNTAIN LAKE, MINN.—H. P. Goetz writes us that the proposition to build works was defeated at the last election.

WALKER, MINN.—This place has voted in favor of works. Chas. Kinkle, Pres.

WYKOFF, MINN.—J. R. Murrel, Pres. Council, writes us that this place has voted to issue $7,000 in bonds for works. Everything is required.

GOTHENBURG, NEB.—An election will probably be held in April to vote on the question of either granting a franchise or of building works. Geo. F. Anderson may be addressed.

HUMPHREY, NEB.—R. P. Drake, Village Clk., writes us that the water supply will be secured from a deep well. Population, 1,000.

MAYVILLE, N. DAK.—Bids are asked until April 5 for constructing works and an electric plant. Sam'l Torgerson, Cy. Audr.

SIOUX FALLS, S. DAK.—An election will be held April 4 to vote on the question of issuing $130,000 in 5% 20-year bonds for purchasing or constructing works.

MANKATO, KAN.—Bids are asked until April 12 for constructing works, and until April 8 for the purchase of $20,000 of water bonds. J. B. Dill, Cy. Clk.; H. V. Hinckley, Engr., Topeka.

ST. JOSEPH, MO.—The Citizens' Water Co. was incorporated March 14 to build new works in St. Joseph at a cost of $800,000. A. W. Brewster, St. Joseph; L. W. Wood, Laclede, Mo.; and John H. Brown and John P. Miller, Chicago, are interested. It is announced that construction on the new works will begin at once. This company was recently granted a franchise. The contract was let to the Seckner Contracting Co., Unity Bldg., Chicago, Ill.

AUSTIN, TEX.—Superintendent of Water-Works Patterson has been authorized to purchase 80 well points for the new filtering trench, and was instructed to furnish the commission with the cost of an auxiliary steam plant to assist the water power in case of drouth, sufficient to guarantee against shortage in electrical power.

BAIRD, TEX.—It is stated that the council has voted to issue bonds for works.

ROSEBUD, TEX.—A company with $10,000 capital stock has been organized to sink an artesian well and to supply this place with water. P. B. Waters, Pres.; S. J. Slade, Gen. Mgr.

CRIPPLE CREEK, COLO.—The Citizens' Water Co. has been incorporated with $3,000,000 capital stock by Geo. McLear, Belfast, Ireland; Henry Levers, Quebec, Can.; Louis E. Carr, of New York and F. C. Whitney, of Elizabeth, N. J.

LEADVILLE, COLO.—John Nowland and Alfred Thielen, Leadville, and C. P. Allen, Ch. Engr. Denver Union Water-Works Co., and Harvey C. Lowrie, Civil Engr., Denver, and D. H. Dougan, Cashier National Bank of Commerce, are appraising the works of the Leadville Water Co., with a view to the city's purchase.

SILVERTON, COLO.—John Casey, Mayor, writes us that the council will submit the question of municipal ownership of the works to a vote of the people next month. It is proposed to either purchase the works of the Silverton Water-Works Co. or to build a new plant.

KETTLE FALLS, WASH.—J. J. Fuller, Clk., writes us that bids are asked until March 27 for the purchase of bonds for the proposed works. After the bonds are sold arrangements will be made for building the works.

TACOMA, WASH.—Water Commissioner Hacker has recommended the extension of the main supply pipe from 48th to 56th St., at a cost of $6,500.

WARRENTON, ORE.—N. J. Crain, Audr., writes us that the commission organized March 13, but nothing definite towards securing works was taken. D. K. Warren, Chn.; C. F. Lester, Secy.

LAKEPORT, CAL.—Bids are asked until April 17 for furnishing the materials, etc., and for constructing the works, pumping plant, reservoir, etc., as described in our advertising columns. H. V. Keeling, Town Clk.

LAKEVIEW, CAL.—The Lakeview Domestic Water Co. has been incorporated with a capital stock of $35,000 by G. H. Coffin and W. J. Shields, Pasadena, Cal.

SACRAMENTO, CAL.—Wm. Mullenney, Cy. Surv., writes us that a proposition to issue bonds for extending the works and for completing the sewerage system, will be voted upon in a few months.

SAN DIEGO, CAL.—The San Diego Land & Tower Co. has submitted a proposition to supply 3,000,000 gallons of water a day to the people of Chula Vista. J. E. Boal, Engr.; F. B. Merriam, Pres. Town Meeting.

HINTONBURG, ONT.—Press reports state that construction of the proposed works will be begun about April 15. C. H. Keefer, Engr., Ottawa; F. J. Merrill, Deputy Reeve.

ROSSLAND, B. C.—This place is reported to have been granted permission to issue $150,000 in bonds for works.

ASUNCION, PARAGUAY, S. AMERICA.—U. S. Consul J. N. Ruffin, Asuncion, has written that there is an opportunity for American capital to invest in the construction of works, sewerage system and electric light plant.

SEWERAGE.

EVERETT, MASS.—Bids are asked until 5 p. m., March 24, for furnishing the following sewer pipe: 6-in., 1,000 ft., straight; 8-in., 5,000 ft., straight; 500 branches, 8x6, 3-ft. lengths; 10-in., 1,000 ft., straight; 200 branches, 10x6, 3-ft. lengths; 12-in., 1,000 ft., straight; 200 branches, 12x6, 3-ft. lengths; 15-in., 1,500 ft., straight; 200 branches, 15x6, 3-ft. lengths; 9,500 ft. straight, 1,100 branches. Pipes over 6 ins. in diameter shall be 3 ft. in length if required. Robt. H. Jenkins, Chn. Com.; Christopher Harrison, Cy. Engr.

FRANKLIN, MASS.—A committee, consisting of Jos. G. Ray, J. C. Gallison and Geo. W. Wiggin, has been appointed to engage an engineer to prepare plans for a system.

MIDDLEBORO, MASS.—Plans for a system of sewage disposal are to be prepared. Jared F. Alden and Jno. A. Mills are on the committee.

WESTBORO, MASS.—The question of a better method of disposing of the sewage is being considered.

BRANFORD, CONN.—A hearing will be given in Hartford March 29 on the question of constructing a system. Selectman Beach and F. E. Peckham may be addressed.

NEW BRITAIN, CONN.—Local papers state that the commissioners and the advisory board expect to have their report on the disposition of the sewage of this city ready by April 1. They estimate that the cost of separating the storm water from the regular sewage, requiring 12 miles of additional sewers, would be from $175,000 to $200,000, required for whichever system is adopted. To this must be added the cost of the system adopted. The cost of constructing a sewer to the Connecticut River would be between $500,000 and $600,000 at least.

ISLIP (L. I.), N. Y.—We are informed that this place will vote April 4 on the question of raising $3,000 by tax for a surface water drain 2,000 ft. long. The drain may be partly of brick and tile, with some iron pipe. Eugene R. Smith, Engr., Islip; F. S. Whitman, Highway Comr.

MOUNT HOLLY, N. J.—This town has decided to extend the White St. sewer.

NEWBURG, N. Y.—It is proposed to build a sewer in North St. and a system in the West End. City Surveyor Coldwell may be addressed.

NEWARK, N. J.—Vice-Chancellor Reed has granted an injunction enjoining Newark from constructing a sewer into the Passaic River, north of the Centre St. bridge. The injunction was issued on application of Marcus Sayre, owner of the land adjoining Centre St. bridge, upon which the Marcus Sayre Co. works are located.

PASSAIC, N. J.—The United States Water & Sewage Purifying Co. has been organized in Passaic. The company controls the Pridham patents for filtering sewage. Smith Hill, Pres.

BRADDOCK, PA.—The question of North Braddock constructing a 6-ft. brick sewer, to cost about $25,000, is being considered, according to reports.

McKEESPORT, PA.—Keeling, Ridge & Co., Forbes Ave., Pittsburg, have been awarded the contract for constructing a sewer in Irwin St. at $30,492.

PITTSBURG, PA.—Bids are asked until March 24 for constructing 30 to 8-in. pipe sewers in a number of streets. E. M. Bigelow, Dir. Dept. Pub. Wks.

WILLIAMSPORT, PA.—It is proposed to construct a 10½-ft. brick sewer to drain the district around Grafiu's Run. Estimated cost, $100,000. G. D. Snyder, Cy. Engr., writes us that no definite action has yet been taken.

WHEELING, W. VA.—Bids are asked until March 25 for furnishing and hauling brick and sewer pipe, curbing, etc., for the year. W. H. Hornish, Clk.

SPARTANBURG, S. C.—J. M. Elford, Cy. Treas., writes us that no bids were opened Feb 3 for furnishing the materials and for laying 16 miles of sewer pipe, as franchises, etc., were so difficult and not specific that all bids were declined. A new advertisement will be prepared.

TYBEE, GA.—W. H. Stair, of the quartermaster-general's department, U. S. A., has been directed to prepare plans for disposing of the sewage at the Tybee garrison.

JACKSON, MISS.—It is stated that the council has ordered the issuance of $100,000 in bonds for sewerage system. Construction of the system will be commenced as soon as possible.

AKRON, O.—Jno. W. Payne, Cy. Engr., writes us that it is proposed to construct a 20 and 18-in. brick sewer 3¾ miles long; estimated cost, $50,000. It is also proposed to build two other trunk sewers.

AKRON, O.—Bids will soon be asked by the city commissioners for Maple and Crosby Sts. improvement, and the Little Cuyahoga Valley sewer.

BELLEFONTAINE, O.—The question of building a system to cost $30,000 will probably soon be voted upon. Commissioner Lamb may be addressed.

CLEVELAND, O.—Bramley & Gribben, 41 Central Ave., Cleveland, submitted the lowest bid March 15 for constructing section No. 4 of the Walworth Run sewer at $121,[illegible]. The next lowest bid was submitted by the Clements Bros. Construction Co., 23 Vincent St., at $139,450. Bids for the fifth and last section of the sewer have not yet been advertised for. That section will be short, but a difficult one to construct. It will run under the Erie tracks to an outlet in the river.

COLUMBUS, O.—We are informed that nothing has been done in the way of constructing the new South Side sewers upon which Julian Griggs, Ch. Engr., reported with plans and estimates on March 3.

LAKEWOOD, O.—The question of a system is being considered. V. H. Burke may be addressed.

MARION, O.—J. W. Scott, Cy. Engr., writes us that it is proposed to build a sewage disposal farm, two sewers, pavements, etc.

TOLEDO, O.—An ordinance prepared by the city engineer, establishing main sewer district 31 at Air Line Junction, has passed the board of aldermen.

WARREN, O.—The state board of health is reported to have approved plans for a sewage disposal plant for the Trumbull county infirmary, prepared by Snow & Barbour, Boston, Mass., and Columbus, O. It is stated that work will be begun at once.

LAURIUM, MICH.—Jos. R. Murphy, Village Clk., writes us that the following bids were received March 14 for constructing a system, as advertised in Engineering News:

Thos. J. Peter, Terre Haute, Ind. (accepted)	$30,822
O'Neil & Son, Faribault, Minn	31,361
Harding & Nelson, Racine, Wis	31,871
Muir & O'Sullivan, Port Huron, Mich	32,074
E. T. Webster, Dubuque, Ia	33,146
J. H. Green & Son, Appleton, Wis	34,656

BUSHNELL, ILL.—It is stated that the contract for building a system will be let about June.

CHICAGO, ILL.—Bids are asked until March 29 for constructing brick and pipe sewers in a number of streets. L. E. McGann, Pres. Bd. Local Improvements.

KANSAS CITY, MO.—City Engineer Wise has suggested that the O. K. intercepting sewer be extended 1,200 ft. along the O. K. Creek to the Memphis bridge, to cost about $25,000.

THE DALLAS, ORE.—The council has decided to build new pipe sewers in the streets below the bluff and on Union St. above the bluff.

SACRAMENTO, CAL.—Wm. Mullenney, Cy. Surv., writes us that the proposition to issue bonds for extending the system and water-works will be voted for in a few months.

AYLMER, QUE.—Propositions are wanted from engineers until March 31 for preparing plans for a system. J. J. E. Woods, Mayor.

GARBAGE DISPOSAL—STREET CLEANING

BRADDOCK, PA.—The council, it is stated, has voted to permit the construction of a plant by private capital, and is desirous of receiving propositions.

GREENVILLE, MISS.—The mayor is reported to have been directed to purchase a crematory.

LOUISVILLE, KY.—Bids are asked by the board of public works until April 17 for furnishing a garbage crematory with a capacity of not less than 250 tons a day, according to reports.

LAFAYETTE, IND.—The committee has recommended that the proposition to put in a garbage disposal plant, submitted by the Dixon Garbage Crematory Co., Toledo, O., be rejected. It is stated that propositions are being received by other companies. The committee consists of Councilmen S. J. Hannagan, Johnson and Rankin.

ST. JOSEPH, MO.—Local papers state that Street Commissioner Furst will soon put into operation new plans for cleaning the streets.

ST. LOUIS, MO.—Bids are asked until April 7 for sprinkling 8¼ miles of streets, from May 1 to Dec. 1. E. S. Foster, Secy. Bd. Pub. Improvements.

GAINESVILLE, TEX.—This place, it is stated, is making efforts to have its streets cleaned.

STREETS AND ROADS

HIRAM, ME.—It has been voted to purchase two road rollers. Chas. Cotton, Clk.; Geo. W. Clifford, Selectman.

BRISTOL, N. H.—At the annual town meeting, March 14, it was voted to macadamize Lake St., at a cost of $2,000. Chas. E. Davis, Selectman.

MIDDLETOWN, VT.—The question of macadamizing the streets at an estimated cost of about $75,000 is being considered by the council. Joseph Merriam and Walter B. Hubbard are on the committee.

ANDOVER, MASS.—The town has voted to appropriate $4,000 for macadamizing.

BOSTON, MASS.—The metropolitan park commissioners have filed plans with the registry of deeds for the proposed new boulevard through Chelsea and Revere.

CLINTON, MASS.—Bids are asked by the Metropolitan Water Board, Boston, until April 4 for surfacing Boylston St., in Clinton and Boylston, with stone, as stated in our advertising columns.

METHUEN, MASS.—It has been voted to macadamize four streets at a cost of $6,700.

NANTUCKET, MASS.—Bids are asked until March 29 for paving about 2,163 sq. yds. of granite block, setting of 1,600 ft. of granite curb, relaying 3,500 sq. yds. of cobble paving, and for 1,900 lin. ft. of macadam. Rollin M. Allen, Secy. Bd. Selectmen.

NORTH ANDOVER, MASS.—At the town meeting March 10 an appropriation of $3,000 was voted for streets and bridges, and $2,500 for macadamizing.

WESTPORT, MASS.—An appropriation of $3,500 has been made for a macadam road.

HARTFORD, CONN.—Bids are asked by the board of street commissioners until March 29 for furnishing the material and for relaying about 43,975 sq. yds. of Trinidad sheet asphalt. Chas. H. Northam, Pres.

ALBANY, N. Y.—Bids are asked by the board of contract until April 3 for paving William and Howard Sts. with brick and granite.

BUFFALO, N. Y.—Bids are asked by the board of public works until March 28 for paving with Trinidad sheet asphalt and repairing asphalt pavements. R. G. Parsons, Secy.

PEEKSKILL, N. Y.—City Clerk Swain informs us that the proposition to issue $100,000 of bonds for paving was voted down March 7.

ROCHESTER, N. Y.—Bids are asked until March 28 for repairing asphalt pavements, not under guarantee, during 1899. Chas. M. Beattie, Clk. Executive Bd.

SCARSDALE, N. Y.—Chauncey T. Secor, Chn. Town Bd., was to apply to the board of supervisors March 17 to appropriate $35,000 for macadamizing the White Plains road.

SCHENECTADY, N. Y.—Bids are asked by the council until April 11 for brick paving on Clinton and Upper State Sts.; also for grading and for constructing a culvert on McClellan St.

SING SING, N. Y.—At the coming town election the question of appropriating $4,000 for highways will be voted upon.

SYRACUSE, N. Y.—The West End Business Men's Association is considering the question of improving Hiawatha St.

UTICA, N. Y.—The council has passed resolutions to pave on Huntington and Canal Sts. Designations will be made April 7.

BLOOMFIELD, N. J.—A petition was presented to the township committee March 20 requesting that the town be bonded for $75,000 to construct about 15 miles of macadam roads. It was decided to submit the question to the voters at the election in April.

CAMDEN, N. J.—An ordinance has been passed to repave a portion of Fifth St. with sheet asphalt. H. C. Kramer, Cy. Clk.

ELIZABETH, N. J.—Press reports state that the city voted on March 15 to spend $250,000 for asphalt paving.

JERSEY CITY, N. J.—A petition has been presented to the mayor for the repaving of Seventh St.——A bill providing for walks on the boulevard loop has passed the legislature. One-half of the cost to be paid by the county.

NEWARK, N. J.—A petition will soon be presented to the Essex county park commission for a speedway 200 ft. wide in Branch Brook Park.

PATERSON, N. J.—Bids are asked until April 3 for asphalt and brick paving in certain streets, as stated in our advertising columns. Thos. McLean, Cy. St. Comr.

TRENTON, N. J.—Bids are asked by the board of chosen freeholders until April 5 for macadamizing three miles of the Asylum Road and one mile of the Upper Perry Road. Josiah Jones, Dir.

WEST HOBOKEN, N. J.—Bids are asked until March 29 for grading, etc., on Shippen St. J. P. McMahon, Clk.

WOODBURY, N. J.—The board of freeholders have appointed a committee to prepare plans for a road through Harrison and South Harrison township. Wm. M. Carter, Engr.

ERIE, PA.—B. E. Briggs, Cy. Engr., writes us that about nine or ten blocks will be paved with brick or asphalt. The appropriation committee is now working on appropriations for the coming year.

FRANKLINVILLE, PA.—A contract has been awarded to Quillian & Leary, South Amboy, N. J., for a gravel road from this place to the Cumberland county line.

PITTSBURG, PA.—Bids are asked until 2 p. m., March 23, for repairing asphalt streets for one year. E. M. Bigelow, Dir. Dept. Pub. Wks.——Reports state that a bill will be presented to the state legislature to authorize this county to issue $3,000,000 of 3% road bonds.

READING, PA.—Bids are asked until March 30 for 1,650 sq. yds. of asphalt paving. S. S. Hoff, Cy. Engr.

SHARON, PA.—Francis F. Davis, Burgess, informs us that an ordinance will probably be passed to pave East State St., at a cost of about $15,000. It is expected to have money enough from the regular taxes to pay the borough's share of $5,000.

UNION CITY, PA.—Bids are asked until April 3 for brick paving on Main St. J. E. Gillette, Borough Secy.

STATESVILLE, N. C.—C. H. Armfield, County Atty., writes us that the measure allowing Iredell county to issue $100,000 of bonds for improvements to public roads failed to pass the legislature. Lack of time to get the measure through before adjournment of the legislature is the reason assigned. The proposed improvement is postponed until a bill can be passed authorizing issue of bonds, by the next legislature.

WHEELING, W. VA.—Bids are asked by the board of public works until March 25 for furnishing paving brick, curbing and sewer pipe during 1899. W. H. Hornish, Clk.

ATHENS, GA.—Bids are asked until April 1 for furnishing Belgian blocks, brick, stone curbing, terra cotta piping, sewer castings and cement. J. W. Barnett, Cy. Engr.

ROME, GA.—H. M. Smith, Cy. Engr., informs us that the city is now in the market for a rock crushing outfit, and engine for macadamizing, etc.

GREENVILLE, MISS.—An election will be held April 4 to vote on the question of issuing $50,000 of 5% bonds for paving, according to reports.

NEW ORLEANS, LA.—The council proposes to pave the sidewalks on portions of 17 streets. W. R. Brashear, Clk.

BARBOURSVILLE, KY.—The Commercial Club has asked the council to call an election to vote on the question of issuing $10,000 of bonds for macadamizing. The proposition will probably carry, according to reports.

LOUISVILLE, KY.—Bids are asked by the board of public works until 12 m., March 24, for brick paving and curbing on five alleys. Thos. P. Craig, Secy.

AKRON, O.—Bids are asked until April 1 for 1,600 sq. yds. of brick paving on Maiden Lane Alley, and until April 15 for paving Maple St. with brick, 11,000 sq. yds. and Crosby St. with brick or asphalt, 5,100 sq. yds. ——John W. Payne, Cy. Engr., writes us that legislation is under way for the paving of Market St., Summit St., Fay St., Kirkwood St., Buckeye St. and Johnston St.

BELLEFONTAINE, O.—Bids are asked until 12 m., March 28, for 1,970 sq. yds. of brick paving, and 4,888 lin. ft. of curb and gutter, on three streets. We are informed that the advertisement stating that bids were asked until April 28 was a mistake. M. J. Nichols, Cy. Clk.

BRIDGEPORT, O.—Bids are asked by the village clerk until April 17 for paving with brick, for furnishing brick, for paving with asphalt, for curbing and for piling; appropriation, $19,778. Hoge, Hix & Hearne, Engrs., 1400 Chapline St., Wheeling, W. Va.

CAMBRIDGE, O.—O. M. Hoge, Cy. Engr., has been directed to prepare plans for the paving of portions of Stubenville Ave., East and West Eighth Sts., Fourth and Fifth Sts.; estimated quantity, 18,000 sq. yds.

CANTON, O.—Lawrence and Mahoning Aves. will be paved with brick.

CELINA, O.—J. S. Metzner, Mayor, writes us that the election held March 6 to vote on the proposition of issuing $75,000 of bonds was carried by a vote of 434 to 73.

SALEM, O.—Bids are asked until April 12 for brick paving in seven streets and asphalt in two streets; also until April 10 for the purchase of $144,493 of bonds, according to reports. Geo. Holmes, Cy. Clk.

TIFFIN, O.—Bids are asked until April 1 for furnishing the material and for brick paving in three alleys. J. B. Ehrentried, Cy. Clk.

TOLEDO, O.—Bids are asked until April 17 for furnishing the material and for block paving on Broadway. Wm. O. Holst, Cy Clk.

VAN WERT, O.—It is proposed to pave the main business street with brick, a distance of three-fourths of a mile.

WAVERLY, O.—H. W. Overman, Cy. Engr., writes us that a proposition to issue $4,000 of bonds for the purpose of extending and improving Lock and Second Sts. will be submitted to a vote at the coming April election.

YOUNGSTOWN, O.—Bids are asked until April 8 for furnishing the material and for laying sidewalks and crosswalks. H. W. Calvin, Clk.

BEDFORD, IND.—Bids are asked until April 10 for constructing three gravel roads. John M. Gainey, County Audr.

CRAWFORDSVILLE, IND.—Bids are asked until April 10 for about 30,000 sq. ft. of cement sidewalk. F. Hoffman, Cy. Engr.

LAFAYETTE, IND.—Bids are asked until March 27 for improving one alley, and until April 10 for 40,000 sq. yds. of sheet asphalt or asphalt block paving and stone curbing, on four streets. W. K. Eldridge, Cy. Engr.; Jas. K. Risk, Cy. Clk.

MICHIGAN CITY, IND.—About three miles of brick and asphalt paving will be constructed this season, according to reports. H. M. Miles, Cy. Engr.

PORTLAND, IND.—Bids are asked until April 17 for constructing 25,000 sq. yds. of brick paving. A. J. Frost, Engr. and Cy. Clk.

RISING SUN, IND.—Bids are asked until April 17 for 16 miles of gravel and macadam roads; estimated cost, $46,000. Robt. C. Nelson, County Audr.

SAGINAW, MICH.—City Clerk Davis has been instructed by the board of public works to ask bids for macadamizing on Genesee Ave.

PEKIN, ILL.—Reports state that 4,000 sq. yds. of paving is contemplated. I. R. Siebert, Cy. Engr.

PEORIA, ILL.—The Central Construction Co. has been awarded a contract for the brick paving of Adams and Elizabeth Sts., according to reports.

BELOIT, WIS.—It is reported that the city is contemplating the construction of about 8,000 sq. yds. of brick paving. F. E. Swope, Cy. Engr.

MARIETTA, WIS.—Bids are asked by the board of public works until April 7 for cedar block paving, grading and stone retaining wall; estimated cost, $5,000. Harry McCalhum, Cy. Engr.

DES MOINES, IA.—Bids are asked by the board of public works until April 10 for brick paving and Portland cement curbing on certain streets.

OTTUMWA, IA.—The question of constructing about two miles of brick and asphalt paving is being considered, according to reports. L. C. Brady, Asst. Cy. Engr.

OMAHA, NEB.—Ordinances have been passed to pave four blocks of Capitol Ave.

WAUKESHA, WIS.—Bids are asked by the board of public works until April 14 for furnishing the material and for constructing about 14,000 sq. yds. of brick paving, 4,850 cu. yds. of grading and 5,750 lin. ft. of limestone curbing, as stated in our advertising columns.

KANSAS CITY, MO.—Bids are asked until 11 a. m., March 25, for furnishing the material and for grading and brick paving on certain streets. Henry A. Wise, Cy. Engr.——Park Engineer Kessler has submitted to the park board a plan of the proposed Oak St. Boulevard.

ST. LOUIS, MO.—Bids are asked until March 31 for reconstructing 27 alleys, and until April 7 for improving 25 alleys. Robt. E. McMath, Pres. Bd. Pub. Improvements.

PUEBLO, COLO.—A bill has been passed by the legislature to permit the city to pave certain streets.

COLFAX, WASH.—Bids are asked until April 4 for furnishing six road machines. John F. Corner, County Audr. and Clk.

QUEBEC, QUE.—W. D. Baillairge, Asst. Cy. Engr., writes us that bids were asked until March 22 for furnishing broken stone, macadam, stone curb and stone and brick paving; also for retaining walls, iron gully wells, etc. Bids will be asked later for asphalt blocks.

ST. LOUIS, QUE.—Bids are asked until March 27 for the purchase of a steam road roller of about 10 tons. A. F. Vincent, Secy. and Treas., 1225 St. Dominique St.

MANUFACTURING PLANTS.

FORESTVILLE, CONN.—The movement shop of the E. N. Welch Clock Co. was destroyed by fire March 7. Reported loss, about $100,000; insurance, $60,000.

MOUNT JOY, PA.—The works of the Grey Iron Casting Co. were destroyed by fire March 11. Reported loss, $65,000; partly insured.

PHILADELPHIA, PA.—The workshops of the Charles Scott Spring Co. were destroyed by fire March 13. Reported loss, $150,000; insurance, about $100,000.

JACKSONVILLE, FLA.—The plant of the Cumner Lumber Co. was destroyed by fire March 13. Reported loss $[illegible],000; partially insured.

WHARF.—Martinez, Cal.—Patrick Manlan will apply to the board of supervisors, May 1, for permission to construct a wharf in the straits of Carquinez.

PIER.—Atlantic City, N. J.—Geo. O. Rehfuss & Spencer Roberts, Archs., 1017 Harrison Bldg., Philadelphia, have made plans for a steel pier, 60 x 1,500 ft., for the Auditorium Pier Co.

DAM.—Waterbury, Conn.—Bids are asked until March 27 for building a small stone dam, using 15 cu. yds. of masonry, and for laying 700 ft. of 15-in. drain pipe. R. A. Cairns, Cy. Engr.

PIERS.—Norfolk, Va.—It is reported that the Norfolk-Hampton Roads Co. has awarded a contract, at $75,000, to Sanford & Brooks, Baltimore, Md., for constructing piers on 15,000 ft. of water front.

DOCK AND DREDGING.—Sarnia, Ont.—The Erie & Huron Steamboat Co. has awarded a contract to John Ginzel, Wyandot, Mich., for a slip dock, and to Geo. Lackerbie, Detroit, Mich., for dredging.

CULVERT AND CEMENT.—Pittsburg Landing, Tenn.—Bids are asked by the Shiloh Battlefield Commission until April 6 for furnishing about 1,700 ft. of 24 to 12-in. culvert pipe and 100 bbls. of Louisville cement.

PIPE CULVERTS.—Chicago, Ill.—Bids are asked until April 18 for constructing nine pipe culverts under the feeder of the Illinois & Mississippi Canal. Maj. W. L. Marshall, U. S. Engr., 1637 Indiana Ave.

BOLTS, NUTS, BOILER, ETC.—New York, N. Y.—Bids are asked by the department of correction, 148 East 20th St., until April 4, for furnishing a hot water pressure tank, bolts, nuts, flat iron, etc., and for installing a new boiler in the steamer "Wm. L. Strong."

CONCRETE WORK, ETC.—Marquette, Mich.—Bids are asked until April 17 for furnishing natural cement, Portland cement, broken stone, iron and hardware supplies, etc., for the concrete superstructure of the breakwater, as stated in our advertising columns. Maj. Clinton B. Sears, U. S. Engr., Duluth, Minn.

DOCKS AND WHARVES.—Tacoma, Wash.—It is reported that the Great Northern Ry. Co. will enlarge its wharfage facilities, extend the tea sheds north 600 ft. and south 100 ft., and build a story to 700 ft. of the ocean shed, and construct a passenger depot and cattle wharf. C. S. Bihler, Div. Engr., Tacoma.

DITCH.—Wapakoneta, O.—Bids are asked until March 29 for constructing about 3,100 ft. of 24 to 12-in. pipe, etc., in the New Bremen ditch, to cost about $1,200, and until April 15 for deepening and widening Prairie Creek by excavating about 30,000 cu. yds., at a cost of about $3,400. Samuel Craig, Engr., Wapakoneta.

CONTRACT PRICES.

RESERVOIR.—Washington, D. C.—The following bids were received by the district commissioners March 11 for constructing a reservoir near Brightwood, as advertised in Engineering News:

Bids Received at Washington, D. C., March 11, 1899, for Constructing a Reservoir near Brightwood.

Bidder.	Subject to retention of 10%. Excavation.	Concrete masonry.	Coping.	Two gate-houses.	Not subject to retention of 10%. Excavation.	Concrete masonry.	Coping.
B. J. Coyle, Washington, D. C.	$0.67	$8.75	$2.10	$8,257	$0.64	$8.24	$2.00
H. B. Quinn, Pottsville, Pa.	.42	7.37	2.00	8,975	.27	7.34	1.97
J. K. Murphy, Washington, D. C.	.14½	8.40	1.42	9,073	.14½	8.40	1.42
E. H. Post, Wilkesbarre, Pa.	.27	7.80	1.60-1.90	9,000	.23	7.50	1.60-1.90
Lyons Bros., Washington, D. C.	.24	7.87	1.70-2.65	9,900	.23	7.51	1.70-2.65
J. F. Killeen, Washington, D. C.	.18½	8.70	2.25	11,000	.17	8.00	2.00
Am. Artificial Stone Pavemt. & Const'n Co., Philadelphia	.35	7.75	2.75	10,965	.30	7.00	2.75
W. F. Breneyer, Washington, D. C.	.29	7.76	1.15-1.80	*9,903	.29	7.76	1.15-1.80
C. H. Esley, Washington, D. C.	.19½	9.11	1.37-1.81	8,166	.17⅞	8.29	1.25-1.60
Andrew Gleason, Washington, D. C.	.19	8.63	1.43-1.81	8,166	.19	7.86	1.25-1.65
J. B. Jones & Co., Baltimore, Md.	.40	8.70	1.50-2.00	8,982	.35	8.00	1.35-1.87
T. M. Leshure, Easton, Pa.	.50	9.95	1.38	10,245	.47½	9.40	1.32
R. A. Malone, Lancaster, Pa.	.40	7.20	1.00	7,300	.35	7.00	1.00
McGuire & Hall, New York, N. Y.	.51	9.70	1.90	10,000	.47	9.24	1.85
Cranford Paving Co., Washington, D. C.	.23¾	8.29	1.20	7,790	.23	8.12	1.17
John Jacoby, Wilmington, Del.	.40	8.25	1.90	8,000	.40	8.10	1.90

*If Hummelstown stone is used in gate-house the bid is reduced $1,900.

CHICAGO, ILL.—It is reported that the Link Belt Machinery Co., which has recently increased its capital stock from $250,000 to $375,000, will erect a new wrought iron foundry.—Reports state that the Schwarzschild & Sulzberger Co., of Kansas City and New York, will erect a new packing-house in Chicago. The new house will be of the most modern design and will be operated by electricity; estimated cost, $2,000,000.

MARYSVILLE, CAL.—The Marysville woolen mill has been damaged by fire. Reported loss, $125,000; insurance, $71,400.

BIG BUG, ARIZ.—A fire at this place has destroyed the stamp mill and hoist of the Red Rock Mining Co.; reported loss, about $25,000.

MANILA, PHILIPPINES.—Bids are asked until March 30 for the erection of a large refrigerating plant and ice-making machine at Manila, capable of turning out 140 tons of ice a day. Estimated cost, $300,000. Col. J. G. C. Lee, Q. M., 415 Pullman Bldg., Chicago, Ill.

MISCELLANEOUS CONTRACTS.

SUPPLIES.—Toronto, Ont.—Bids are asked until March 27 for general supplies. John Shaw, Chn. Bd. of Control.

FIRE ALARM SYSTEM.—Flemington, N. J.—It is reported that the town authorities are considering the question of installing a new fire alarm system.

HARDWARE, ETC.—New York, N. Y.—Bids are asked by the department of public charities, East 26th St., until March 27, for furnishing hardware, oils, etc.

WHARF.—Montecito, Cal.—The Santa Barbara County Club has awarded a contract to John Williams, at $2,750, for a footpath wharf 288 ft. long on iron piles.

STORAGE WHARF.—Boston, Mass.—The state has awarded a contract to Geo. A. Cahill, at $131,900, for constructing a storage wharf at South Boston.

DREDGES.—Petersburg, Va.—The Virginia Dredging Co. has let contracts for two dredges, each 136 ft. long, 36 ft. wide and 15 ft. deep, to cost about $17,000.

BONDS.—Cleveland, O.—Bids are asked by the board of park commissioners until April 5 for the purchase of $500,000 of 4% park bonds, according to reports.

EXCAVATING.—New Orleans, La.—Bids are asked until April 22 for excavating the main outfall canal; bond, $5,000. A. Schreiber, Secy. Drainage Comn., City Hall.

EXTENDING TUNNEL, ETC.—Ontario, Cal.—Bids are asked by the San Antonio Water Co. until April 8 for constructing an extension to the Bodenhamer tunnel, a bulkhead in the tunnel and a shaft near 21st St. B. C. Shepherd, Secy.

WATER PIPE.—Washington, D.C.—The district commissioners received the following bids March 11, 1899, for furnishing cast-iron water pipe: National Foundry & Pipe Works, $23.30 a ton; Camden Iron Works (accepted), $21.08; McNeal Pipe & Foundry Co., $24.40.

PAVING.—Saginaw, Mich.—H. E. Terry, Cy. Engr., informs us that the following bids were received March 17, 1899, for asphalt and brick paving; the paving is on Court St., from M. C. R. R. to Bay St.:

Quantities.	Barber Asp. Paving Co., New York.	Alcatraz Const'n Co., New York.	F. E. Cole, Toledo, O.
Excavation ..... 9,200 cu. yds.	$0.15	$0.20	$0.15
Brick paving .... 6,700 sq. yds.	1.55	1.57	1.57
Asphalt paving ..19,750 " "	1.70	1.78	1.89
Curb, fur. & set. 100 lin. ft..	.60	.65	.60
New curbstone .. 8,600 " "	.12	.17	.12
Tile drain ..... 520 rods....	.60	.70	.60
Protection timber. 6,200 ft. B.M.	16.50	18.00	16.50
Total	$46,846	$49,517	$50,733

The same submitted bids for paving in Hamilton St., from Court to Mackinaw St., at the same prices. The quantities are 2,000 cu. yds. of excavation; 1,840 yds. of brick paving; 3,860 yds. asphalt paving; 2,200 ft. curbstone, reset, 135 rods of tile drain; 1,600 ft. of protection timber. Totals: Barber company, $10,085; Alcatraz company, $10,657; F. E. Cole, $10,856.

SUPPLIES.—Detroit, Mich.—The following bids were received by the board of public works March 13, 1899, for furnishing supplies for the year: Lumber—Salliotte & Fergason, 2-in. Norway pine, $18.64 a M. ft.; 2¼-in. Norway pine, $19.64; common lumber, $14.36; white pine, $24.86; hemlock plank, $14.24; hemlock scantling, $13.64. C. W. Restrick: 2-in. Norway pine, $16.22; 2½-in. Norway pine, $16.87; common lumber, $12; hemlock plank, $12.33; hemlock scantling $11.33; resurface sides, 50 cts. each. Cement—Milwaukee Cement Co., 60 cts. a bbl., 8 cts. to be allowed for empty sacks; Western Cement Co., 68 cts. a bbl., 10 cts. for empty sacks; H. Houghton, 53¾ cts. a bbl., 5 cts. for empty sacks; F. B. Stevens, 56½ cts. a bbl., 6 cts. for sacks. Receiving basin stone—E. J. Delehanty, $19 each, complete; Ortman & Co., Euclid $19.84, Elyria $21.04 each. Iron castings and fountains—The Co-operative Foundry Co., $1.30 round lock covers, $2.25 round lock gates, $1.40 iron castings, $29 iron horse-fountains. This company will allow $15 a ton for the city's scrap iron. Last year $26,000 was expended for lumber, $22,000 for cement, $4,200 for sewer gates, $7,800 for basins.

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